TAYLOR. (R. W.)

CHRONIC INFLAMMATION INFILTRATION AND ULCERATION OF THE EXTERNAL GENITALS OF WOMEN

WITH A CONSIDERATION OF THE QUESTION OF ESTHIOMÈNE, OR LUPUS, OF THESE PARTS

BY

R. W. TAYLOR, M. D.

PROFESSOR OF DERMATOLOGY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL;
SURGEON TO CHARITY HOSPITAL, NEW YORK

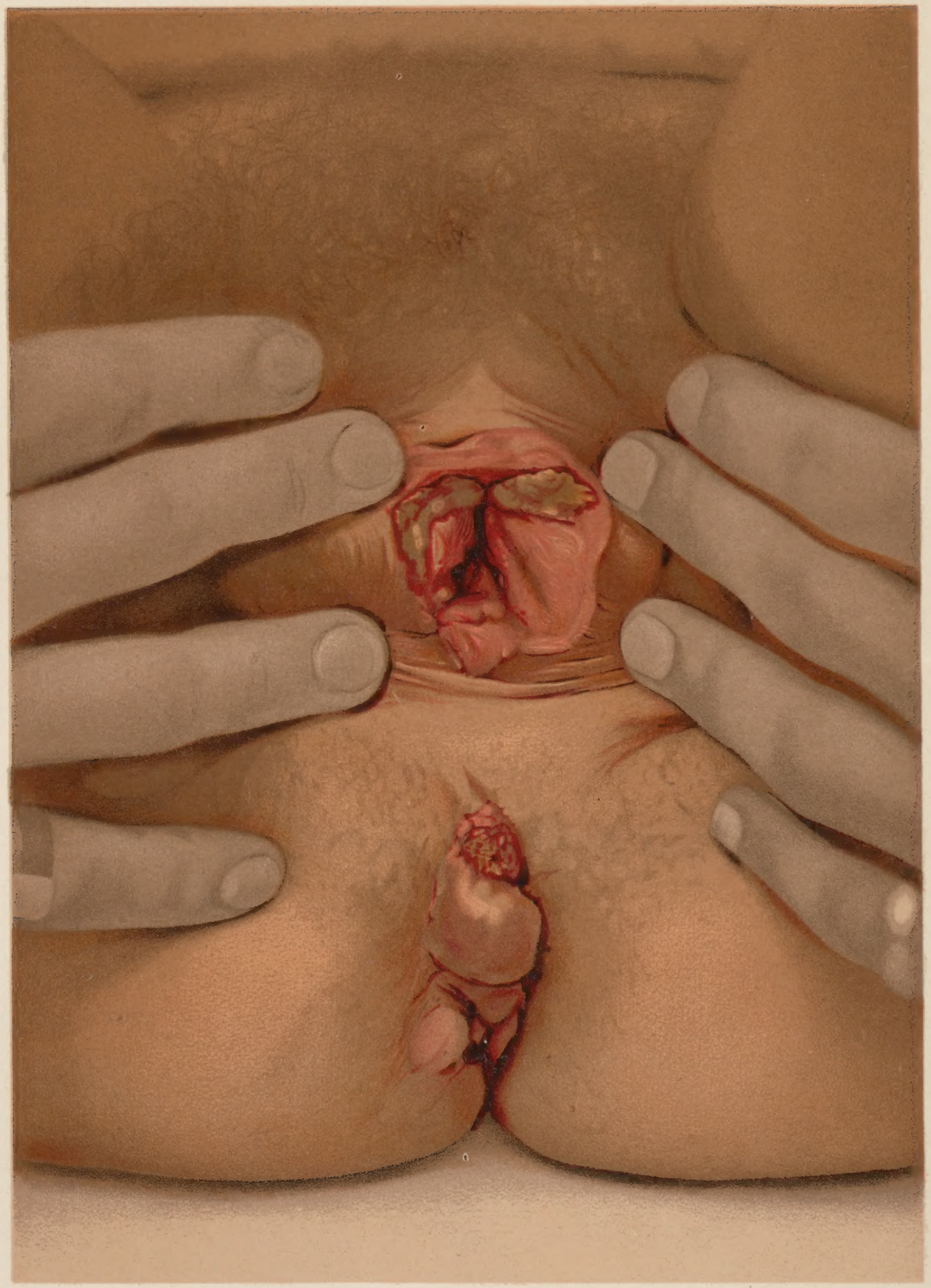
presented by the author.

SURGEON GEN'L'S OFFICE 3881 LIBRARY

ILLUSTRATED BY ONE CHROMO-LITHOGRAPH AND TWENTY-SEVEN ENGRAVINGS

REPRINTED FROM THE NEW YORK MEDICAL JOURNAL FOR JANUARY 4, 1890

NEW YORK
D. APPLETON AND COMPANY
1890



DR. R. W. TAYLOR ON INFLAMMATION AND INFILTRATIONS OF THE EXTERNAL GENITALS OF THE FEMALE.

SHOWING CHRONIC INTRAVAGINAL CHANCROIDS AND SYPHILITIC NODULES OF PERINÆUM AND ANUS.

CHRONIC INFLAMMATION INFILTRATION AND ULCERATION OF THE EXTERNAL GENITALS OF WOMEN

WITH A CONSIDERATION OF THE QUESTION OF ESTHIOMÈNE, OR LUPUS, OF THESE PARTS

BY

R. W. TAYLOR, M. D.

PROFESSOR OF DERMATOLOGY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL;
SURGEON TO CHARITY HOSPITAL, NEW YORK

ILLUSTRATED BY ONE CHROMO-LITHOGRAPH
AND TWENTY-SEVEN ENGRAVINGS

REPRINTED FROM THE NEW YORK MEDICAL JOURNAL FOR JANUARY 4, 1890

NEW YORK
D. APPLETON AND COMPANY
1890

CHRONIC INFLAMMATION, INFILTRATION, AND ULCERATION OF THE EXTERNAL GENITALS OF WOMEN,

WITH A CONSIDERATION OF THE QUESTION OF ESTHIOMÈNE, OR LUPUS, OF THESE PARTS.*

In the year 1849 Huguier published a paper in which he detailed nine cases of hypertrophic and ulcerative vulvar disease, and from his studies of them he elaborated a disease which he called esthiomène. This disease he considered to be essentially a lupus, but he preferred to designate it esthiomène when it occurred about the female genitals, and lupus when found upon the face. He gave a fanciful sketch of what he regarded as topographical and pathological similitudes between the human face and the configuration of the external female genitalia, and, having classic authority for the statement that lupus appeared on the former, he made bold to claim that all non-malignant, hypertrophic, and ulcerative lesions found upon the latter were of necessity lupus, or, as he euphoniously called it, esthiomène. When I state that it is very probable that most of his cases were those of old syphilis, that their ætiology was wholly unexplored, and that the clinical history of the fanciful disease was given in a most positive manner, though based only on crude and far-reaching assumptions, it seems wonderful that his lucubrations were entertained by educated men. Yet even to-day, though there are a few dissenters, there are very many believers in a morbid entity which they call lupus or the esthiomène of Huguier. I do not know in all medical history of an essay founded on gross error and pure assumption which has had such influence for so many years in molding medical opinion, not only in France but in other countries.

In England, West, Matthews Duncan, Angus Macdonald, and others have published papers describing lupus of the female genitals, and, though they do not use Huguier's appellation, but its equivalent, lupus, the influence of his teaching is seen to pervade their writings.

In America, Huguier had until recently an ardent supporter in the late Dr. Isaac E. Taylor, who published two notable contributions to the subject of these vulvar lesions. It is an unpleasant duty to criticise adversely a living author, and it is painful to criticise the dead whom in life I much respected, but science knows nothing of friendships. Therefore it is with much reluctance that I say that the baneful influence of Huguier was transferred to this country, and was much intensified by Dr. I. E. Taylor's zealous advocacy of that misguided man's errors. In reading our lamented friend's memoirs, one can but wonder how such an eminent man could take such a narrow view of a subject and see only an occult disease in cases of simple inflammation, in ordinary vegetations, in syphilitic processes, and even in malignant new growths.

I regret very much that I can not speak in terms of high commendation of the essay of Dr. Grace Peckham on ulcerative lesions of the vulva, or of her handling of the question of lupus or esthiomène, for she shows so much zeal and industry and such a desire for light and truth. An attentive reading of her paper indicates that she sees that Huguier alleged too much and was probably wrong in his assumption, but notwithstanding that the specter of lupus hangs over her and she does not bring out and elaborate the strong points which her case really offers.

The latest Amercian contributor to the subject is my friend Dr. Hyde, who is disposed to give what in my judgment is too great an importance to the influence of syphilis in the causation of these vulvar lesions.

In Germany, Huguier's tenets have been largely received by gynæcologists, but we look in vain for a systematic consideration of the subjects involved in them by German authors, particularly syphilographers and dermatologists.

In these introductory remarks I have only mentioned certain authors whose contributions we may say are landmarks, but in an appended bibliography all authors and papers will be mentioned, while many cases will be criticised in the text.

A fair presentment of the views held to-day regarding simple (and by that I mean all processes not included under the head of malignant degenerations) hypertrophic and ulcerative vulvar lesions is as follows:

1. That they are identical with lupus or the esthiomène of Huguier.

2. That they are the result of essential and specific syphilitic processes.

3. That they are the result of some indeterminate ulcerative process.

4. That certain cases may be the result of tuberculous infection.

* Read before the New York Academy of Medicine, December 19, 1889.

It may be further added that certain of those who do not accept the lupus theory look upon these affections as being peculiar and even extraordinary, and while some even regard them as mysterious and specific, they only indulge in generalities in speaking of them.

As early as 1870 I saw that the profession in general was all wrong regarding this matter, and that the only way to get at the truth was to study the subject *de novo*, entirely untrammeled by the views and theories of others. The rich venereal field of Charity Hospital and other medical positions held by me have furnished me with an abundance of material upon which to prosecute these studies. I have also invoked to my aid the talent of Dr. Ira Van Gieson, who has done the anatomo-pathological portion of this essay.

In reaching the conclusions here given I would say that much labor and time have been spent and that my aim has been to study the subject upon broad ground and to only accept appearances as worthy of being stated as facts after they had long been thought over and often verified. I felt that, on making such a radical departure as was necessary in the consideration of non-malignant hypertrophies and ulcerations of the vulvo-anal region, too much care could not be taken in the matter of clinical study, and that too much thought could not be expended upon the conclusions derived from that study. I feel therefore warranted in presenting, in brief, the following conclusions, which will be fully elaborated in the course of the essay :

1. That a large and perhaps the greater number of chronic deforming vulvar affections are due to simple hyperplasia of the tissues induced by irritating causes, inflammation, and traumatisms.

2. That chronic chancroid is a cause in a certain proportion of cases.

3. That many cases are due to essential and specific syphilitic infiltrations.

4. That other cases are caused by the hard œdema which often complicates and surrounds the initial sclerosis and perhaps gummatous infiltration.

5. That many cases are due to simple hyperplasia in old syphilitic subjects who suffer from chronic ulcerations of the vulva long after all specific lesions have departed.

6. That some cases also in old syphilitics are due to simple hyperplasia without the existence of any concomitant ulcerative or infiltrative process, and seem to be caused by conditions which usually in healthy persons only result in vulvar inflammation.

The basis of this essay involved a consideration of several hundred cases of vulvar hypertrophies and many thousands of miscellaneous affections of the vulva.

In the matter of illustrations I have selected such cases as would in my judgment best present the subject, and I have not aimed at showing very much exaggerated ones.

Simple Hyperplasia and Hypertrophy.—For clearness and fullness of clinical description we must consider in a general manner the smaller orders of tumors of the vulva, since they naturally lead up to the larger growths which are found on these parts. These smaller orders of tumors are, first, papillary growths or vegetations, and, second, hyperplasia of the various prominences, folds, and anfractuosities found within the more or less complete ellipse formed by the labia minora.

As to vegetations of the vulva I need say little just here, since they will be quite fully considered a little further on in this section of the subject. They may occur singly or in various numbers, and are prone to develop in the vulvar sulcus, chiefly around the urethral and vaginal orifices. They are commonly seen on all portions of the vulvo-anal region, and show no tendency whatever to localization to the vulvar ellipse. They are of a pinkish or deep-red color, spear-shaped, digitate, sessile, pedunculated, cauliflower-like, or they may resemble strawberries of various sizes. They are essentially papillary hypertrophies, and show a tendency to exuberant growth. The latter feature and their tendency to irregular and scattered development are points of diagnostic value in separating them from the hyperplasic lesions now to be considered.

Simple new growths of the vulva have been variously called polypi of the urethra and of the vagina, hypertrophied caruncles—berry-like tumors—villous growths, warty excrescences, and papillary polypoid angeioma. Though there is much uncertainty in the minds of medical men as to their real pathology, and though the most varied views are entertained as to their essential nature, the matter is a very simple one. In my studies of the larger orders of hypertrophies I included a consideration of the pathology and clinical history of these smaller ones. As a result I found that, clinically, the larger growths were but exaggerations of the smaller ones, and I also learned, through pathological and microscopical studies, that the morbid process observed in small lesions can be traced in progressive and undeviating development through all sizes of these simple hypertrophies until the enormously large ones are reached. This progression of development is well shown by description and illustration in the section on pathological and microscopical anatomy of this essay. I thus strongly state these facts for the reason that I have seen the affection begin in an insignificant manner on or within the labia minora and in the course of years eventuate in the development of enormous vulvar hypertrophy. Further than this, I have been able to confirm the clinical facts which I have observed by what I deem satisfactory and convincing microscopical studies of the small, intermediate, and large lesions which I excised.

The small growths of the vulva, which may properly be called hypertrophied caruncles and simple hyperplastic tumors, are found either singly or in numbers of from two to a dozen or more. They are sometimes very small, of the size of a large shot, or as large as a pea or a strawberry, or even larger. They may present a decided firmness of structure, or they may be soft and vascular, and between these two extremes there are many gradations. They may be of a pale-pink color, of a bright scarlet-red tint, of a deep-red, or of a purplish hue. When they are very firm, the hyperplasia is composed of all the cell elements of the mucous membrane and fibrous tissue, and the new growth of vessels is not excessive; but in the softer variety there is a

greater amount of new-vessel development, consequently they are more vascular, of deeper color, and softer in structure. These facts will fully explain the varying clinical features of density and color. I may, in passing, remark that these lesions may give rise to no uneasiness whatever, but may also be the cause of great suffering, paroxysmal or continued, chiefly from pruritus and neuralgiform symptoms, particularly when they are near the urethral or vaginal orifice.

There certainly should be no doubts in the mind of the observer as to the nature of these new growths, and in the majority of cases in women under forty years of age a suspicion of cancer need not be entertained for a moment. But, strange to say, all sorts of opinions are entertained as to their nature, and that which is in reality simplicity itself becomes doubt and obscurity in the minds of the untrained and those who are imbued with the idea that lupus of the vulva is common. It is an unpleasant and ungrateful task to criticise other men's work, but, in order to clear the subject of the clouds which hang over it, I must pass judgment on cases of this form of trouble reported under improper names. No one more than I respects the deservedly high position of Dr. J. Matthews Duncan, and it is with some hesitation that I say that, after a careful study of his valuable papers in the "Transactions of the Obstetrical Society of London" and of his paper in the "Edinburgh Medical Journal," I firmly believe that his Cases I and II in the former and Cases I, II, and III in the latter—reported, respectively, as *lupus minimus* and *hæmorrhagic lupus*—are not of a lupoid nature at all, but that they are typical instances of simple local hyperplastic growths. Neither in appearance, course, nor outcome do these growths present any affiliation whatever to lupus, and their denomination by that title is wrong and productive of nothing but error and confusion. Dr. Duncan very candidly says that Dr. Thin, in careful microscopic examinations, failed to find any evidence of lupus in any of the excised growths given him by Dr. Duncan. He further admits that he uses the term lupus because others did so, and a careful reading of the text shows that Dr. West, in his book on diseases of women, adopted Huguier's views as to lupus of the female genitals, and that Duncan followed West.

It must not be assumed that all these small growths increase in size and eventuate into larger ones. Many remain for years without any notable increase in size, others become larger and troublesome and are excised, and perhaps but few reach large proportions. Social position, personal cleanliness, and many other considerations tend to determine the life history of these growths. It should always be remembered that, as age increases, these benign growths are very liable to become malignant in character. This is particularly the case with the more vascular ones. Consequently the surgeon should always recommend their ablation in women about and beyond forty years of age.

Large Hyperplasiæ and Hypertrophies of the Vulva of Simple Origin.—We come now to a consideration of the larger orders of vulvar hypertrophies. Like the smaller ones, they may be found in early puberty, up to middle life, and are less common in persons beyond forty years of age.

These hyperplasiæ are, as a rule, the direct result of some irritation or of traumatism. Vulvar inflammation, whether simple or the outcome of antecedent chancroids, elytritis, herpes progenitalis, leucorrhœa, gonorrhœa, uncleanliness, masturbation, tears in coitus and parturition, scratches, cuts, bruises, eczema, and all forms of traumatisms, have been found to be exciting causes.

It is impossible to give a systematic and comprehensive description of these hypertrophies, since they all differ from one another. This is due to the fact of the very great variation in the conformation of the vulva in women. In some the labia majora are large, in others very small and exceptionally absent. The labia minora are seen in an infinite number of sizes, shapes, and general configurations. Some are long and thin, some short and thick, some smooth on their free edge, others irregular and perhaps festooned or frilled. Then the structure of the vestibule, the condition of the introitus vaginæ, and the shape of the fourchette are found to vary so greatly that nothing like uniformity is seen. It can be readily seen, therefore, that a good-sized essay could be written on all the varying appearances offered by these vulvar growths, and then the limit would not be reached.

In some cases there is simple enlargement of the natural parts, but in the majority there is more or less deformity and even distortion. Very little of diagnostic importance is offered by a study of the various shapes and sizes of these growths. I have selected from my cases three which, in their appearances and clinical history, are, I think, all that are necessary to convey a clear idea of these growths. The first case (see Fig. 1) shows the localization of the affection in one nympha, and its history is as follows:

Case I. *Hyperplasia of One Nympha and of a Part of the Perinæum.*—J. T., aged thirty, widow, domestic, free from syphilis, had severe attack of herpes progenitalis involving the right labium minus when twenty-eight years old. About six months later she had a profuse purulent vaginal discharge for a time, and then noticed that the right labium minus was sore and slightly inflamed. She drank considerably and paid very little attention to her genitals, and in a short time the inflamed part became noticeably enlarged and of a deep pinkish-red color. Though she followed treatment at times, the enlarged labium steadily increased in size until it reached the proportions shown in Fig. 1. It is seen to be a flat tumor, semicircular in shape, quite deeply indented on its free margin, and limited sharply to the right labium. Its color was of a whitish pink when the patient was long in the recumbent position, and of a pronounced pinkish hue when she walked very much. She thought that the dimensions of the tumor were increased when she took active exercise. She was very clear as to the fact that in its early days the tumor was of a rosy red color, softer and thicker than now, and that as it had grown older it had become decidedly contracted and much firmer in consistence. At the base of the enlarged nympha corresponding to the introitus vaginæ were two small superficial ulcers of simple character. The perineal rhaphe was somewhat thickened and ended in a thickened and flabby pouch-like mass of skin, which hung over the unaffected anus as she lay on her back. The inguinal ganglia were unaffected. Beyond a sensation of heat and pruritus which occurred in short paroxysms, the patient experienced no discomfort from

her vulvar affection. As she was a woman tolerably careful of her person, it is probable that the morbid processes of hyperplasia and ulceration were in a measure held in abeyance. I excised the labial growth, and the vulva was soon restored to a seemingly healthy condition. She declined operation on the growth at the margin of the anus. Two years were occupied in the development of these hyperplasiæ. They had no influence upon her health whatever.

It will be noted that the labial hyperplasia began in this woman at the age of twenty-eight and reached the size depicted in Fig. 1 in about two years.

It is important here to call attention to the flabby, pouch-like tumor at the anal orifice, since growths like it are so common in all cases of vulvar hypertrophy whatever may be their origin. These protrusions are not, strictly speaking, piles, for the reason that they are not of necessity connected with the anus, certainly in their early stages. They seem to begin as hyperplasiæ of the skin of the perinæum, and as they grow to settle themselves on the anterior margin of the anus. In the uncomplicated condition they do not impinge upon the anal orifice, but as they grow larger and broader they involve that outlet more or less, at first on its integumental part, and later, in very chronic cases, the rectal mucous membrane may become affected by the hyperplasia.

In Fig. 2 we reach a stage of excessive hypertrophy of the vulvar tissues, and a study of Case II brings out many interesting and important points.

Case II. *Hypertrophy of Both Nymphæ and of the Clitoris.*—R. M., aged twenty-five, American, single, had cohabited with men from her sixteenth year, but was free from syphilis. She had had numerous attacks of mild vulvar and vaginal inflammation, due to sexual irritation, but gave no history of gonorrhœa. About a year before the date of operation she noticed that the caruncule myrtiformes were rather red and tender, and that some of them soon increased to the size of small peas, being firm and somewhat shotty to the touch. Then she noticed that her external genitals were growing larger and protruded, whereas in former years the nymphæ had habitually been closed in by the labia majora. In the early period of the development of these vulvar growths they were of a bright-red color, and from their inner surfaces bloody serum exuded at times. On one occasion a mild hæmorrhage took place which lasted several hours. At this time also the thickness of the labia was much greater than it was when the swellings became as large as shown in the figure. She experienced very little occasional heat and pruritus in the parts, and only applied for relief when they became rather obstructive to copulation. When first seen, the nymphæ and clitoris were much hypertrophied. The left tumor was fully five inches long, and by traumatism became gangrenous in its distal half, which soon fell off. The parts presented the appearance and color of integument, were firm, even leathery and resistant, not at all sensitive, perhaps rather callous, and they had an irregular lobulated and nodulated contour. They are well shown in Fig. 2. On several occasions mild and ephemeral ulcerations had existed in the deep vulva, but they caused no uneasiness. Two weeks after removal of the hypertrophied parts the woman stated that she was as well as ever, and left the hospital. In this case the irritation from the myrtiform caruncles extended to the lesser labia, and this led to their hypertrophy. In the early stage of the affection the parts were softer, more succulent, and redder; as it grew old they become condensed and gradually lost their color, until they came to resemble closely ordinary integument. The general health was wholly unaffected. There was no involvement of the inguinal ganglia.

In this case, as a result of simple local inflammations, the myrtiform caruncles became inflamed and then hyperplastic, and from these foci the new growth extended and involved the labia minora, including the prepuce of the clitoris, and that organ itself, in hypertrophy. The low form of inflammatory, red, œdematous infiltration of the vulva which was observed early in the woman's medical history will be fully discussed later on. In this and the preceding case the limitation of the morbid process to the vulva and nymphæ is clearly marked. In them, also, the tendency of the affection to push outward and downward is well shown. Later on, however, the deeper parts might have become invaded, as we shall see. Case II, therefore, may be accepted as a typical one, showing involvement of each and all of the parts of the vulva. Though the introitus vaginæ was at the date of the operation thickened and less supple than normal, this condition was undoubtedly due to symptomatic irritation, since in a few weeks after the operation the natural condition of the parts was restored.

In Fig. 3 we observe the acme of the hyperplastic process, which centered itself in the præputium clitoridis and a part of a nympha.

Case III. *Hypertrophy of the Clitoris.*—N. M., twenty-six years of age, Irish, married, had not suffered from any vulvar or vaginal affection. Six months before the operation she had fallen upon a fence and wounded the mons Veneris and upper part of the vulva. These regions were the seat of ecchymosis and pain for about two weeks. Shortly after, the patient noticed a protrusion from the upper part of the vulva, but, as it was unaccompanied by pain or inconvenience, she paid no attention to it. It, however, grew quite rapidly, until in about eighteen months the growth measured four inches, and, besides being very inconvenient from its bulk and situation, it caused uneasiness by its weight. The patient noticed that when she was on her feet very much the tumor was larger and of a deeper color than it was if she remained recumbent. There was no affection of the inguinal ganglia. The mass is well shown in Fig. 3. It was rather more than four inches long and about two inches at its widest part. It involved the prepuce of the clitoris and a portion of the upper part of the left nympha. It was hard and firm in consistence, of a pinkish-white color, and its surface was studded with lobulations and intersected with large and small furrows. It was ablated, and the woman left cured.

It is interesting to note that this large tumor grew in about eighteen months. It is an example of the rapid development of vulvar hyperplasia. In this case there was positively no syphilitic complication, and such is the condition of many women thus affected. Years ago I had under my care a woman, aged twenty-four, suffering from a similar hypertrophy of the clitoris, who had syphilis shortly before the onset of the vulvar lesion. This case was afterward under the care of my colleague, the late Dr. Bumstead, in Charity Hospital, who removed the mass, the posterior surface of which is shown in Fig. 16 to be irregularly tuberculated and lobulated. It is interesting to note that Dr. W. P. Bush reports a case of this form of hypertrophy in a woman twenty-four years old, who had had syphilis some years previously. These observations are interesting in connection

with cases of hypertrophic vulvar lesion in syphilitic women which will be considered further on.

A special point of interest in this case is the rapidity of development of this enormous growth. Assuming that the patient's story was correct (and great care was taken to get at the truth), the large mass was developed in about eighteen months. This I may say is very exceptional, for in several other cases I have noted that the time occupied in the growth of hypertrophy of the clitoris has been two or more years. In the present instance the trouble began in trauma, but I have seen a number of cases in which hypertrophy of the prepuce of the clitoris was due to masturbation. I have now under observation a woman of twenty-two who, since her twelfth year, has produced almost daily one or two orgasms by digital irritation of the clitoris, and yet the hypertrophied mass is not larger than the first joint of one's thumb. Strange to say, the woman remains in excellent health.

In this affection it is very probable that the hyperplastic process begins in the prepuce, and that later on the body of the clitoris is involved.

These hypertrophic growths of the vulva have been wrongly called elephantiasis, notably by Hildebrandt, and more recently (1885) by Zweifel. Neither in their clinical history nor in their pathological anatomy do they in any way resemble true elephantiasic growths, which are due to lymphatic inflammation with connective-tissue increase. They are elephantine only in size.

Vulvar Hypertrophy Consequent upon Vegetations.—There is a form of hypertrophy of the vulvo-anal region of women which I believe has not heretofore been mentioned by authors. The initial stage of this form consists in the development of simple vegetations on any part of the external genitals. Owing to neglect, want of care and cleanliness, and of surgical intervention, these growths become enlarged as they also usually increase in numbers. As they grow in height and breadth, particularly those on the outer portions of the labia majora (where they are subject to continuous friction), they lose their warty appearance and come to look like nodules, processes, or tabs of skin. They are, as it were, polished off, losing entirely their granular, raspberry-like look, and taking on the appearance of integument. In Fig. 4 this form of hypertrophy, in its initial and advanced stages, is well shown. The figure was taken from life, from a young pregnant woman who had suffered for a long time from leucorrhœa, the irritation from which led to the development of the new growths. In the depth of the vulva three rows of typical vegetations may be seen, and on the outer edge of each of the labia majora a string of fleshy masses, which had been vegetations which had undergone the polishing-off process, may be seen. Over the perinæum are a number of conical tumors of like origin, and hanging over the anus is a large, gourd-shaped mass and several smaller ones, which had resulted from the transformation of several clusters of very exuberant warts. Unless ablated, these tumors inevitably lead to great hypertrophy and disfigurement of the parts. They, acting as low-grade inflammatory foci, induce hyperæmia and hyperplasia in the vulva, and in the end lead to its great distortion. I have many times seen this general hypertrophy of the external genitals by warts, and I recall an instance in which these growths, being very large, were ablated, and in their stumps hyperplasia took place, which led to great deformity. The practical teaching of these cases is not only that these new growths should be thoroughly removed, but that great care should be taken that their sites shall not become the foci of hyperplastic new formations.

In this connection it is interesting to note that in the late Dr. Isaac E. Taylor's latest brochure ("Lupus of the Cervix Uteri and Female Genitalia," 1888) his Cases III and IV, which are reported as *lupus prominens* with their hypertrophy of the labia minora, are simply instances of very luxuriant simple vegetations. Further, it may be added that his second case is one of this form of growths, which, while becoming flattened and less warty, have given rise to much adjacent hyperplasia. The formidable titles of "*lupus superficialis*" or "*lupus serpiginosus*" are given to the case. Case I of this interesting paper is an excellent example of malignant new growth of the genitalia of an old woman, though it is labeled "*lupus hypertrophicus et tuberosus.*"

In the matter of the diagnosis of this form of vulvar hypertrophy it is well to remember that these new growths may be found not only on the vulva, but also and very commonly on the outer surface of the labia majora and parts around them.

There are a number of conditions relating to the early stages of these vulvar hyperplasiæ which demand consideration. In many subjects, particularly young, cleanly, and healthy ones, these hypertrophic growths run their course to full development without any perceptible signs of inflammation. The growths in these subjects are, while increasing, of a pink or pinkish-red hue, and, as they grow larger and push from between the labia majora, they become blanched and finally may look like integument.

In another class of cases, particularly in unhealthy, uncleanly women, in those subject to any vaginal discharge, and in women about and after the menopause, we see synchronously with their growth an increase in inflammatory and quite densely œdematous features. In these cases there is always more or less concomitant vulvar hyperæmia. The hyperplastic parts (when their mucous membrane is yet intact) are either of a deep-red or of a dull-violet-red color. They have not the firmness of structure, perceptible to the touch, of the less hyperæmic growths, but are rather softer and, we may say, more succulent—a condition, in all probability, due to a correlated œdematous exudation.

In this soft and succulent stage of the hypertrophies there is, besides the lesser degree of sharp limitation and of localization, a decided tendency to ulceration, particularly in the fissures, sinuosities, and anfractuosities which are found in them. In all uncomplicated cases of these simple forms of hyperplasia it will be evident to a careful examination that the ulcerative process is always secondary to the hypertrophy. It is usually plain to the observer that the power of resistance of the morbid tissues to irritation is greatly impaired, and that when pressure exists, as from close coaptation of the parts, or when any irritation is ex-

erted, there will be find ulceration. These ulcers, however, do not present any pathognomonic features, and it is amusing reading to peruse the descriptions of these lesions by those who lean to the view that they are due to lupus. They see distinctly that the ulcers have not a lupoid look, and they go over point after point trying to reconcile in their minds the evident discrepancies.

We find as concomitant features of these vulvar hypertrophies simple excoriations, smooth ulcerations, with or without slight or pronounced granulating tendency, indolent conditions, and sometimes sluggish ulcers covered with necrotic detritus. They are almost always, however, in uncomplicated cases, what we may term simple ulcers, having the most varied shapes—linear, penniform, irregular, and stellate—and differ very markedly from those we shall study in the two following sections.

But, simple as they are, they exert a very bad effect upon the course of the new growths. They tend to increase the morbid process itself, and they themselves very often grow and cause incalculable mischief. Thus they may burrow and cause fistulous tracts into the labia and urethra, work their way forward and cause vesico-vaginal fistula, pass backward into the ischio-rectal space, and even into the rectum, forming a channel between it and the vulva or vagina. Then, again, they frequently lead to necrosis of small and even large hypertrophic growths by eating them away at their bases.

These ulcerations often cause mild and even severe hæmorrhage, which is usually readily controlled when they are superficial, but which may be very intractable when they are deeply seated.

It not uncommonly happens, when both sides of the vulva, as is very common, are the seat of hypertrophy in the succulent stage, that excoriation of the coapted surfaces occurs, and from them there is an oozing of bloody serum or blood. It is this condition, undoubtedly, which the older writers observed in what they called *oozing tumor*. There can be no doubt that the third case of Dr. Angus Macdonald and the fourth case of Dr. Matthews Duncan (reported in the "Edinburgh Med. Journal"), called, respectively, lupus and hæmorrhagic lupus, are instances of simple hyperplasia of the vulva in the succulent and excoriated condition. I am also convinced that the very interesting case of Dr. Peckham's belongs to this category, and I know of no better illustration of this complication than is given in the chromo-lithographic plate which accompanies her valuable essay.

In favorable cases the succulent stage of these growths gradually subsides and the parts slowly pass into the condition of condensation, until in the end a dense, leathery state may be reached.

In bad cases—and they are generally in old women—however, the trouble extends, and destruction of the vulva and its canals is more or less complete. In this event the patient gradually wastes away from marasmus, dies of phthisis, or of chronic diarrrhœa or dysentery. For many years, however, the general health may remain unchanged, and only when the destruction is great, and the natural outlets of the body more or less destroyed, do signs of breaking up begin to show themselves.

When ulceration attacks these hypertrophies there is very often more or less enlargement of the inguinal ganglia.

I have been particularly struck with the fact that I have never seen cancerous degeneration of any of these hyperplastic growths, even when they have become very old and when very much irritated. The little red vascular tumors of the caruncles and vulvar fringes may from irritation become epitheliomatous in women toward and beyond forty years of age, but when they have reached the stage of condensation they, like their larger congeners, may become much inflamed and ulcerated, may be the seat of abscesses, and may slough off, but they show no tendency to become epitheliomatous. This is probably due to the fact that, with the thickening of the skin, it becomes impervious to the invasion of exuberant epithelial tissue from above.

In some cases I have seen much ephemeral hyperæmia and an erysipelatous condition of the growths and parts around them, particularly in those who had become infected with gonorrhœa, who had vaginal discharges and were uncleanly, and also in women who had returned to the hospital after a protracted debauch.

In their succulent stage these hyperplasiæ might possibly be mistaken for epithelioma, but the mistake should not last long. Epithelioma is usually more localized, of a much greater density even to stoniness, is productive of a large warty or papillomatous and ulcerated surface, and is very soon accompanied by enlargement of the inguinal lymphatic ganglia. The ulcerations of epithelioma are upon the surface of the neoplasm, while those of simple hyperplasia are mostly found in the interstices and fissures and at the bases of the simple hypertrophies. Epithelioma of the vulva gives rise to pain of a lancinating character, while the subjective symptoms of the simple growths are not severe and consist mostly of heat and pruritus. In any case, the diagnosis can be made at once by a microscopic examination of the morbid tissue.

We shall see in a later section the various manners in which syphilis affects these parts.

Hyperplasia resulting from Acute and Chronic Chancroidal Ulcerations.—Hypertrophies of the labia majora and also of the labia minora, as a result of chronic chancroids, are far from uncommon. Any one who has had large experience in the treatment of these ulcers in women will at once call to mind cases where, after the healing of the ulcer or ulcers, a persistent and rebellious thickening of the parts remains. Time, care, and appropriate treatment will, in most cases, cause the disappearance of this residual thickening. But, when patients are careless or refractory to treatment, uncleanly, and given to drink, the hypertrophy, if it has attained a moderate size, will almost inevitably increase. Then, again, we constantly find it perpetuated by gonorrhœal and leucorrhœal discharges. I have many times seen hypertrophies, as large as those depicted (and presenting the same general appearances) in Figs. 1, 2, and 3, which have developed after little, red, thickened spots or patches, deep in the vulva, or on a nympha which had previously been the seat of a chancroid. The foregoing remarks ap-

ply to conditions secondary to what we may call acute chancroids—that is, lesions which have come and have disappeared within one, two, or three months, for this form of ulcer is very persistent in women.

In like manner hypertrophy of the vulvar introitus, vaginal and juxta-anal region is far from infrequent as a direct result of chronic chancroids. I could present many striking and even exaggerated instances of this form of trouble, but I prefer simply to show two cases which, owing to the external position of the chancroids, offer a very favorable opportunity to view their extent as well as the secondary hyperplastic results which they have given rise to.

In Figs. 5 and 6 is well shown a very clear case of vulvar chancroid which has produced much external and internal deformity. Its history is very interesting, for it gives in a general way an idea of the chronicity of the ulceration and of the indifference and carelessness of its bearer.

Case IV. *Chronic Chancroid of the Nymphæ with Hyperplasia of the Vulva and Lower Part of the Vagina.*—J. M., aged thirty-five, American, widow, free from syphilis, had chancroids of the labia minora two years previously, which were cured in three months. She noticed that after the healing of the ulcers the parts were thick and red, more tender than formerly, and that they had a tendency to bleed slightly after coitus. Remaining well, with this exception, for a year and a half, she again contracted chancroids and entered the hospital after they had lasted about three months. At this time the labia minora and præputium clitoridis were as seen in Fig. 5, very much hypertrophied (for in the normal state they did not protrude between the labia majora), and on their surfaces small and large papillations or nodulations were to be seen. The protruding parts were firm, even dense, in structure, and slightly darker than the integument of the surrounding parts and without any evidence of inflammation whatever. When the nymphæ were separated a large chancroidal ulcer was seen extending from the right nympha on the lower surface of the præputium clitoridis to the left nympha, and extending back to the introitus vaginæ. In Fig. 6 the outlines of this large superficial ulcer may be seen rather deep in the vulvar slit. The introitus vaginæ was much thickened and considerable resistance was offered by the resulting stenosed condition to the introduction of the finger, which revealed thickening of the lower half of the vagina. The parts felt hard and brawny. Jutting from the fourchette was one large and several small masses of hyperplastic tissue, which were formerly little fringe-like masses of the ruptured hymen. The hyperplasia, which had now lasted fully two years, was in the well-marked succulent stage, and without the ulcerations would pass for that due to simple causes. The hyperplasia had also involved the perineal rhaphe and had caused a nutmeg-sized, pedunculated, fleshy mass which grew from the anal margin. Upon the healing of the chancroid the woman went out, her external genitals being in a state of decided hypertrophy and infiltration.

The history of this woman is simply a repetition of that of most of her class thus affected. In the hospital we call them "rounders," for they come and go. This woman stays in the hospital just long enough for the healing of her ulcer and then departs as she did a year previous after her first chancroid. If the ordinary observer had seen her on her departure, her genitals being the seat of a rather red succulent hyperplasia, he might have pronounced it lupus. The painlessness of the genitals in this condition is often surprising, and, although the ostium vaginæ is often hard and rather unyielding, these women continue to have promiscuous coitus. After an acute stage the hyperæmia settles down into an indolent condition which may thus remain indefinitely, or it may be succeeded by an exacerbation of inflammation and ulceration due to drunkenness, debauchery, and general uncleanliness. Internal medication is powerless to aid them, and topical applications, which are slow to heal the parts in the early stage of the career of these women, in the later periods have little and often no effect. As the trouble becomes chronic, the whole vulva, more or less of the vagina, the anus, the rectum, the vesico-vaginal septum, and vagino-rectal space become inflamed and hyperplastic, and, as a result, ulcerated.

In general, chancroids on the clitoris and external portions of the genitals heal readily, while those of the ostium vaginæ, of the inner surfaces of the labia minora, and of the fourchette are often very difficult to cure, and they show a tendency to become chronic, to induce hyperplasia and hypertrophy of the parts. In the chronic stage, in proportion as the ulcers are deep and inaccessible and as they involve the natural outlets, they are menaces to life in the disastrous conditions which they lead to.

Large or small fleshy masses, the result of an extension of the inflammatory process, may occur on the perinæum or at the margin of the anus. Fleshy tumors and excrescences may result from chancroids hidden in the puckered folds of the anus.

In the next case the chronicity of the chancroid of the labium minus extending as far back as the ostium vaginæ is well shown, the resulting hyperplasia is made very evident to the eye, and its indolent persistency is well attested in the fact that judicious treatment of a year's duration was necessary for its dissipation.

Case V. *Chronic Chancroid of the Left Labium Minus with Adjacent Hyperplasia.*—C. R., American, a domestic, aged forty-eight, never had syphilis, had a small chancroid just above the fourchette on the left labium minus, which had lasted nearly a year, when she entered the hospital. It then was an elevated ulceration (ulcus elevatum) on the inner side of the left nympha about the size of a silver quarter. It showed no tendency to extend, but remained in an indolent condition, became hyperplastic and elevated. The corresponding nympha was very much thickened, hard, and elastic, and the hyperplasia continued from it into the vagina for about an inch. The appearances are well shown in Fig. 7, which was made from a photograph taken fifteen months after the chancroidal infection. It will be seen that the hyperplasia is well limited to the affected nympha. Though this woman received the utmost care from my internes and nurses, the ulcer healed very slowly, and it required a full year's treatment (for, contrary to the custom of these patients, this woman remained continuously in the hospital) to produce resolution in the nympha and the introitus vaginæ.

These chronic chancroids with great vulvar hypertrophy are usually found in women beyond thirty and forty years of age. Such women, as long as they are in any way attractive to the male sex, remain in the hospital just long enough to become "patched up," as we may say. In the early years

of their trouble their general health does not suffer, and it is to the uninitiated a matter of surprise to see women with distorted, disfigured, and ulcerated vulvæ complain so little if at all, and seem so well. As time goes on, however, things change. Ulcerations may perforate the urethra, the bladder, the vagina, and the rectum, and they may burrow and form large cavities which may open by fistulous tracts about the buttocks or thighs. Hæmorrhages of greater or less severity may take place and erysipelatous inflammation, beginning about the genital parts, may spread beyond and be accompanied by severe systemic reaction. Then, as years go by, signs of decay show themselves. The patients begin to cough and emaciate, and a rapid phthisis may end their misery. They may become attacked by affections of the kidneys and liver which prove mortal. Then again we constantly see these women fall into a condition of marasmus, over which treatment has no influence whatever. And again we see life gradually sapped by rebellious chronic diarrhœa or dysentery. I have seen several of these women carried off by well-marked pyæmic infection.

In a general way I should say that women suffering from these severe forms of chronic chancroids and vulvar deformity, with all their dangerous concomitants, live from eight to fifteen years; an average of ten years, I think, is quite constantly observed.

I shall treat of chancroids in syphilitic women in the following section.

It is important to remember that, though we use the term chronic chancroid, very many of the so-called ulcers do not present the typical and classical appearance of these lesions when of recent origin. Indeed, the term as applied to ulcers about the vulva is one of great elasticity, since almost any good-sized intractable ulcer is thus denominated. These ulcers present wide variations, since they may appear like ulcerated excoriations, they may present resemblance to the classic chancroids, and they may be covered with a greenish-brown or grayish-black film, or even with a layer of tenacious necrotic tissue. Their edges very frequently present nothing pathognomonic, and their secretion of pus and pus combined with molecular detritus, and even blood, will be offensive to the nose in proportion as patients are uncleanly and untreated. Some authors have laid much stress on the odor of the secretions in these cases of vulvar hypertrophy, but my experience teaches me that it conveys nothing of diagnostic import, but that all secretions are exceedingly disgusting in unclean persons.

In many instances the origin of these ulcers in a contaminating coitus is readily ascertained, while in others they seem to develop *de novo*. The truth of the matter is that in all cases of vulvar hypertrophy, particularly in the succulent stage, ulceration is liable to occur as a result of irritation or traumatisms of all kinds, and that they are probably caused by micro-organisms, which find a nutrient nidus in chronically inflamed tissues. Case IV will illustrate the point admirably. The woman left the hospital healed as to her ulcers, but still the victim of hypertrophy, which in the deep parts of the vulva was yet in the succulent stage (and these parts are the ones always most prone to ulceration). A subsequent chancroidal infection was not absolutely necessary to develop in her so-called chancroidal ulcers. In the inflamed and hyperplastic state of her genitals any cleft, fold, or anfractuosity was liable to fall into ulceration, as a result of uncleanliness, of any vaginal discharge, and from the irritation of the system induced by a debauch or by poverty.

In some cases we find hypertrophy precede ulceration, and in others chronic ulceration to lead to hypertrophy. As a general rule, however, hyperplasia is by far the more active and the ulcerative the less prominent process. It is remarkable to observe the great chronicity and indolence of these vulvar ulcers. They, as a rule, increase very slowly, and may remain many months, and sometimes one or two years, without any perceptible change. In these cases, however, the hyperplasia goes on more or less actively. The reason for the slow and indolent growth of these lesions lies in the fact that the condensation of the hyperplastic tissue offers, chiefly by its narrowing of the blood-vessels, a not soft and succulent soil for the destructive process.

The inguinal ganglia in these cases are usually somewhat enlarged and sometimes much swollen. In some cases no change is noted in them, consequently they are not of much aid in diagnosis.

In the following section we shall see that in recent and old syphilitics chronic ulcers, which we also call chancroidal, may give rise to great hyperplasia of the vulvar tissues.

Hypertrophies of the Vulva due to Syphilis.—In the causation of vulvar hypertrophies, syphilis is a very important factor, and it becomes our duty to define its scope and its limitations. There are a number of surgeons who, repudiating a lupous origin of these deformities, are disposed to attribute them very extensively, if not quite exclusively, to syphilis. This is well shown in the remarks made by an eminent English surgeon in the discussion of Dr. Matthews Duncan's cases, in which he stated his belief that they were caused by tertiary syphilis. Now we shall see that syphilis is frequently the direct and also the remote cause of vulvar hypertrophy and hyperplasia, and to this end I shall briefly present a series of cases which I think are examples of all the syphilitic deformities of these parts.

Vulvar Deformities in the Early Stages of Syphilis by Indurating Œdema.—In some exceptional cases the initial sclerosis occupies a whole labium and much enlarges it. In a decided number of instances we find that accompanying the initial lesion, either around it or in its vicinity, a hard œdema of one labium or both labia occurs. This œdema, which has been called sclerotic or indurating, is very peculiar and is the sole appanage of syphilis. It usually begins in an indolent aphlegmatic manner, without pain, and perhaps with no heat and pruritus, and becomes fully formed in from one to three weeks. Then again, in some cases, its onset is quite brusque and rapid, and in a few days a labium may be greatly enlarged. When such a labium is examined it will be found to be of double, even quadruple, its normal size. Its tegumentary covering may be normal in color or a little redder than usual, while its mucous membrane is of a dull red. In some cases the corresponding labium minus may

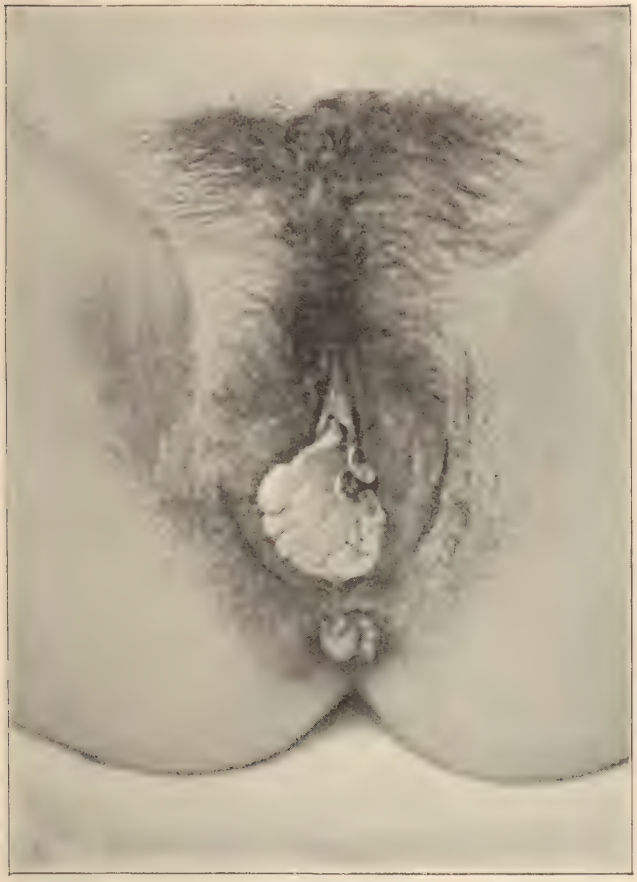


Fig. 1.—Showing hypertrophy of the right nympha and perinæum.

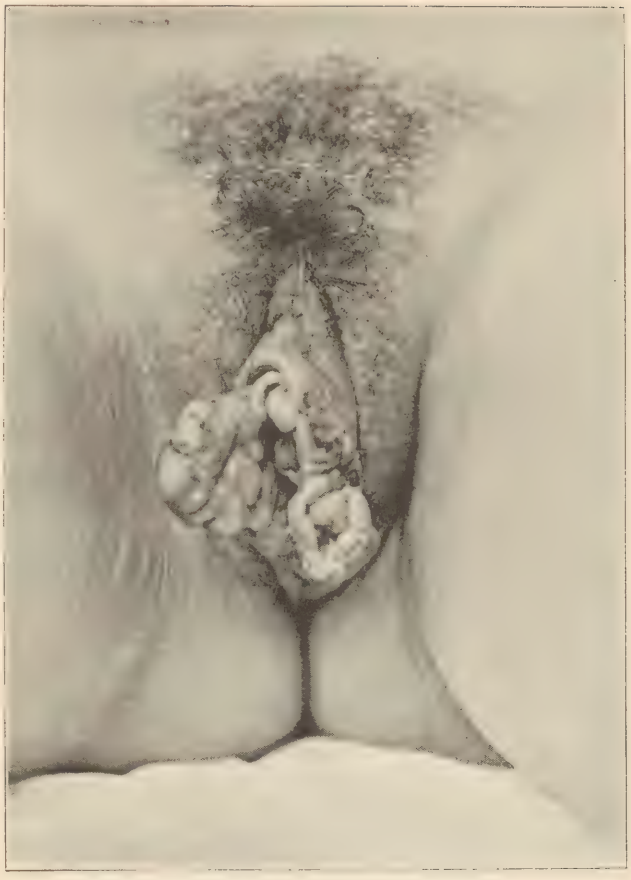


Fig. 2.—Showing hypertrophy of the nymphæ and clitoris.

Fig. 3.—Showing enormous hypertrophy of the clitoris.

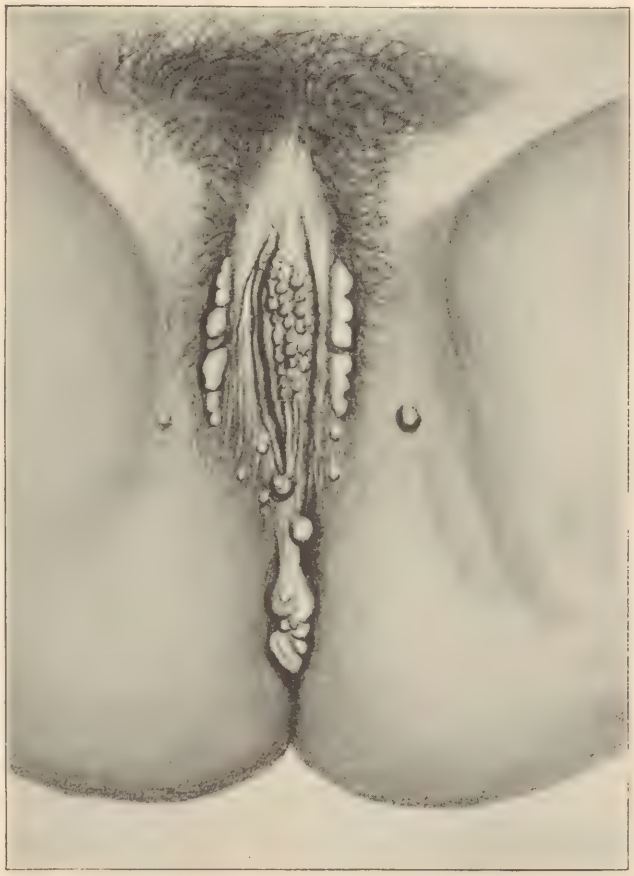


Fig. 4.—Showing simple vegetations in process of change to fleshy tabs and hypertrophic masses.

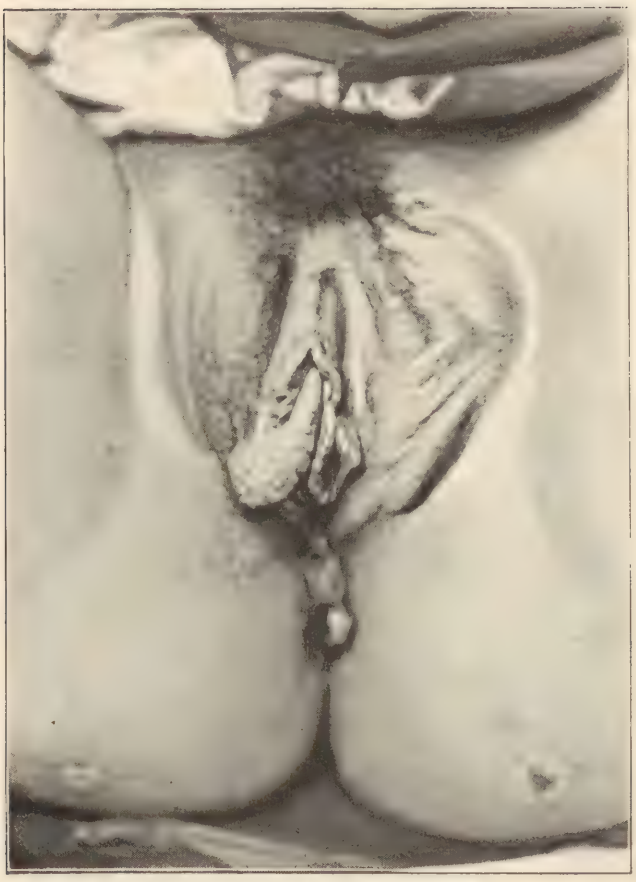


Fig. 5.—Showing hyperplasia of the nymphæ from chronic chancroids.

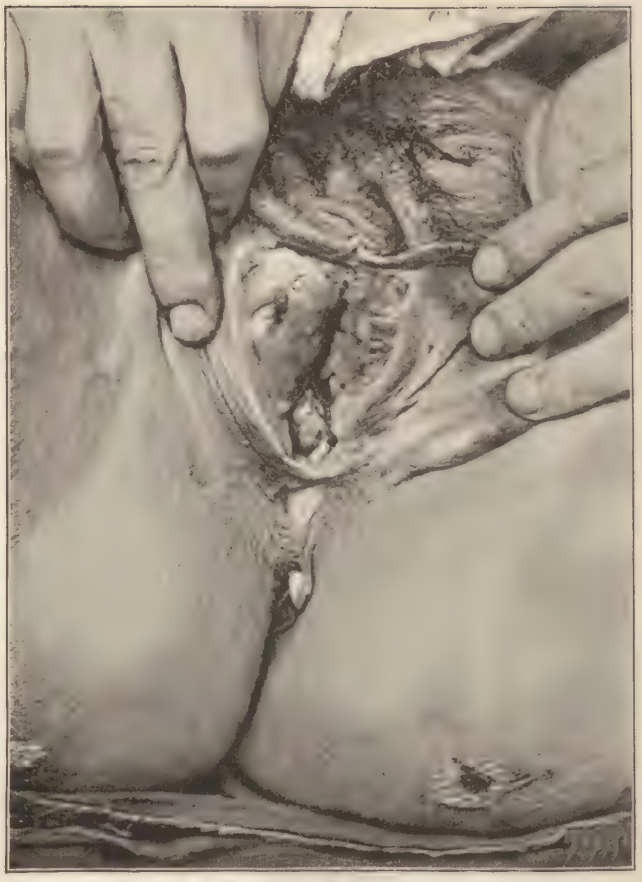


Fig. 6.—Showing chancroids of inner part of vulva, with much hyperplasia of vulvo-anal region.

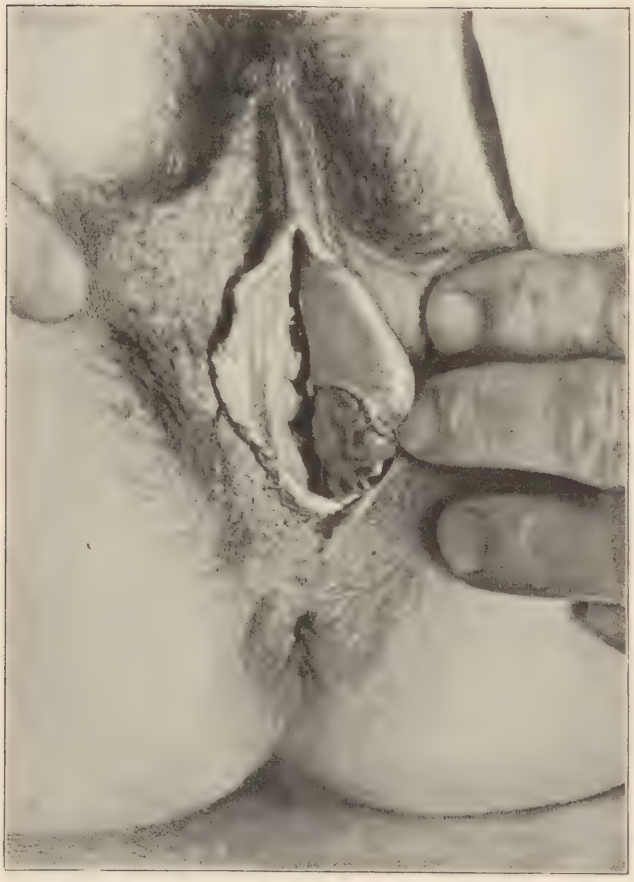


Fig. 7.—Showing chronic chancroid of left nympha, with hyperplasia of the parts.

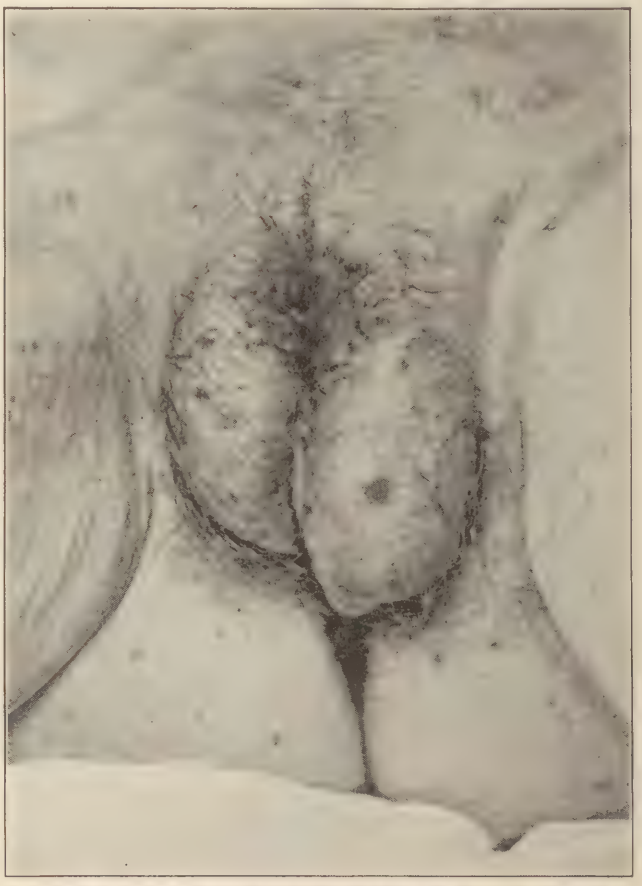


Fig. 8.—Showing indurating œdema of left labium majus in early syphilis.

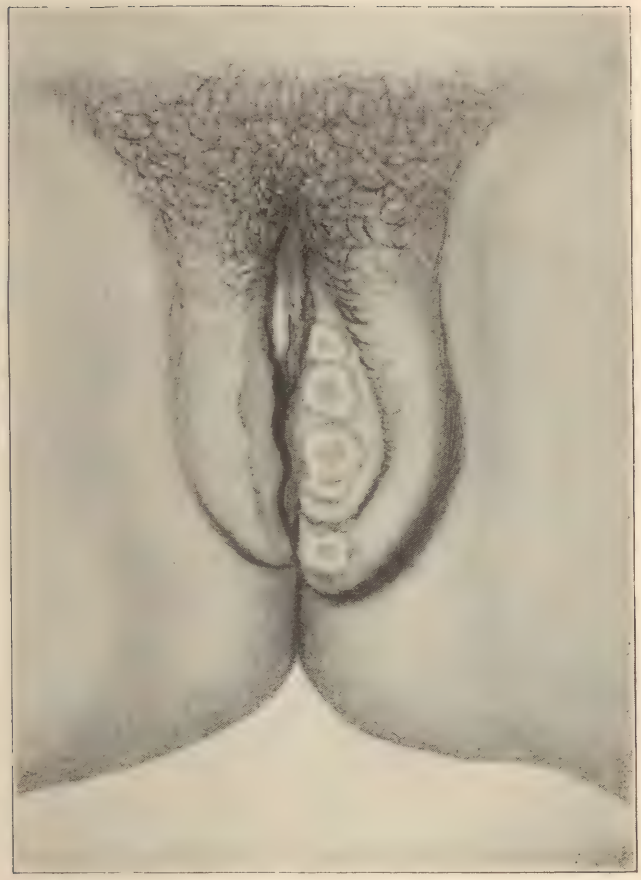


Fig. 9.—Showing indurating œdema of the left labium majus and minus complicating condylomata lata.

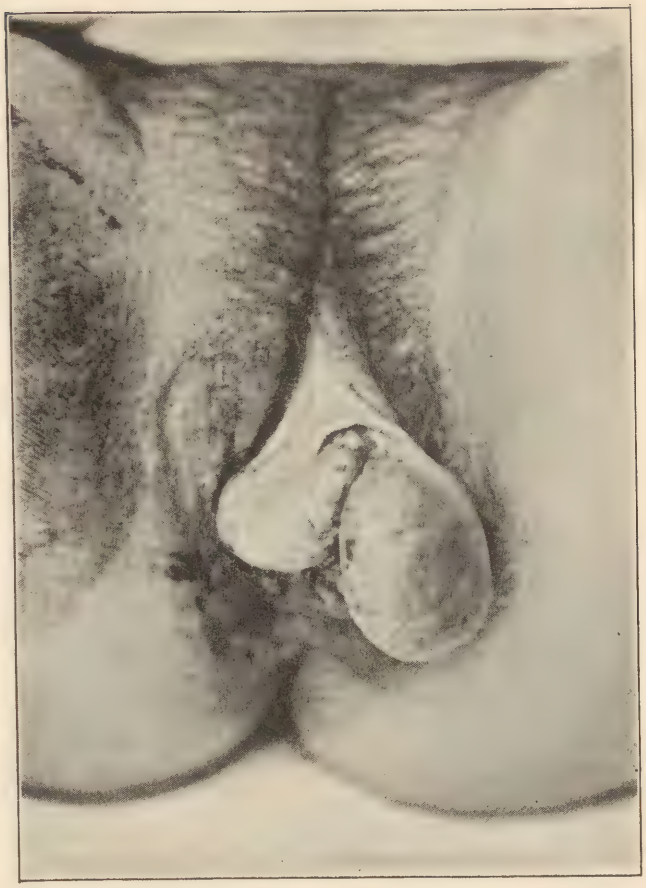


Fig. 10.—Showing indurating œdema of both nymphæ in late syphilis.

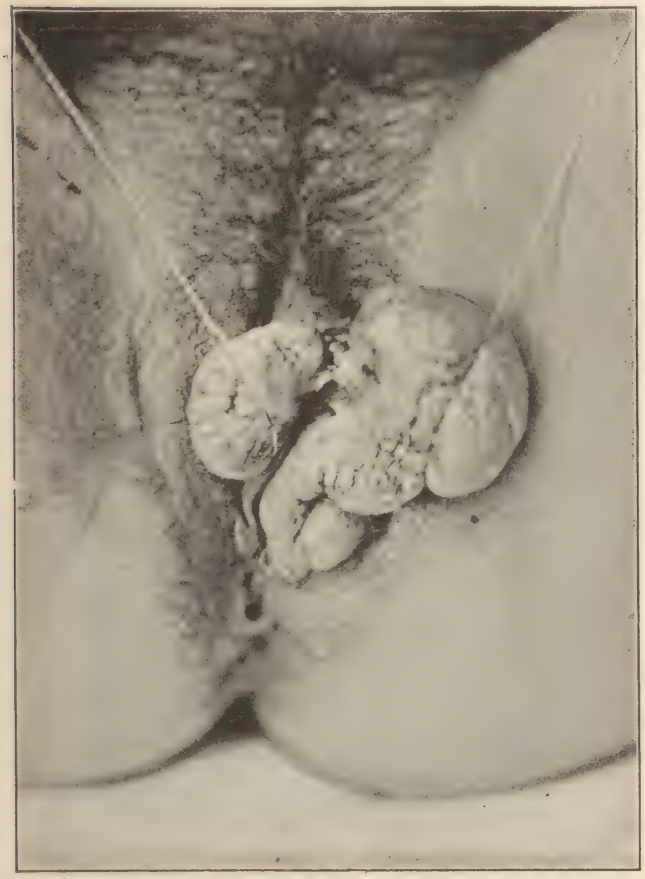


Fig. 11.—Showing an inner view of the nymphæ depicted in Fig. 10.

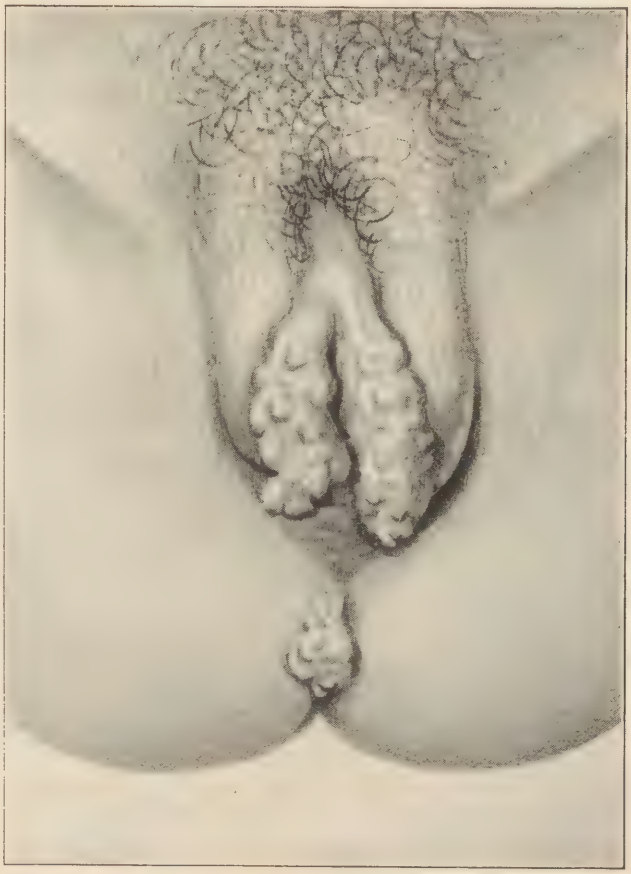


Fig. 12.—Showing great hyperplasia of the clitoris and nymphæ. Sequel to Fig. 8.

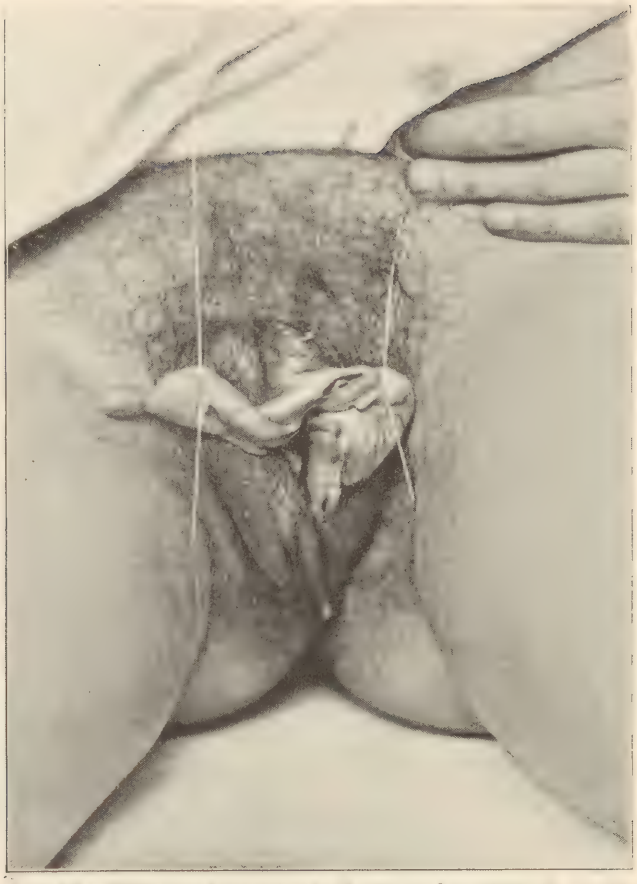


FIG. 13.—Showing hyperplasia of external genitals in an old syphilitic.

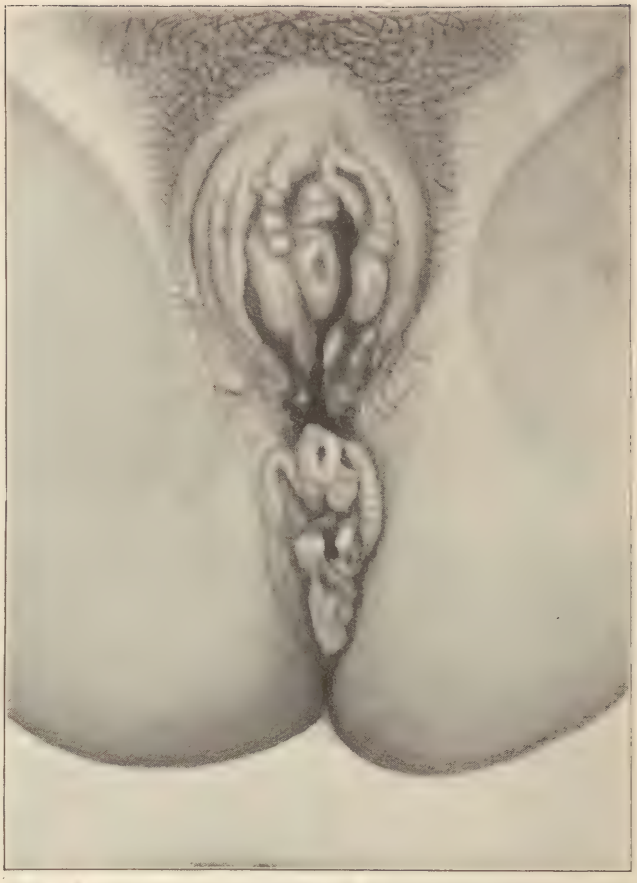


FIG. 14.—Showing hyperplasia of vulva and perinæum, and destructive ulceration, in an old syphilitic.

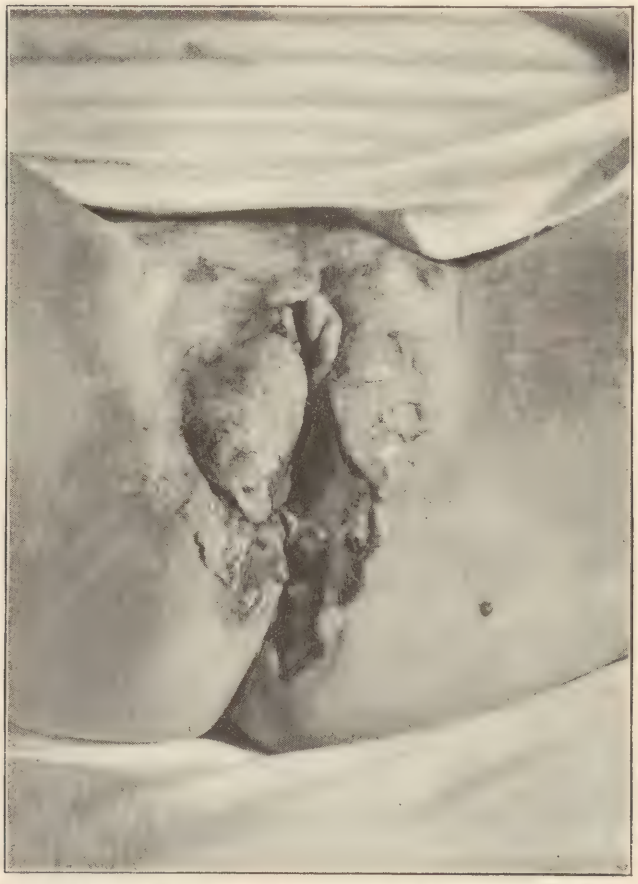


FIG. 15.—Showing great destruction of hypertrophied vulva and perinæum in an old syphilitic.

FIG. 16.—Showing great hypertrophy of the clitoris in an old syphilitic; posterior view.

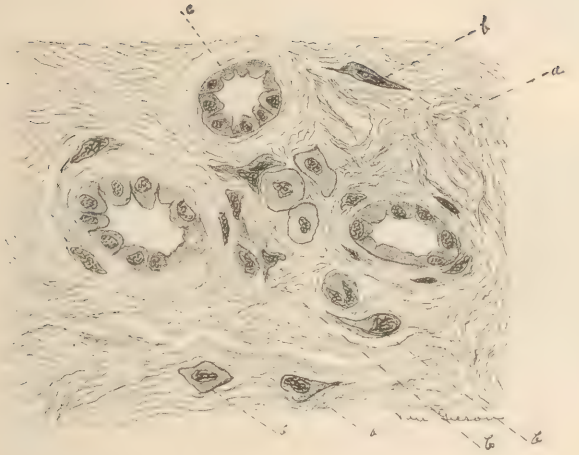


Fig. 17.—(Zeiss oil immersion, $\frac{1}{12}$; ocular, 4; tube length, 160 mm.) From Case I. Three small blood-vessels with swollen and granular endothelial cells projecting into the lumen. *a*, plasma cells. *b*, swollen or proliferating fixed connective-tissue cells.

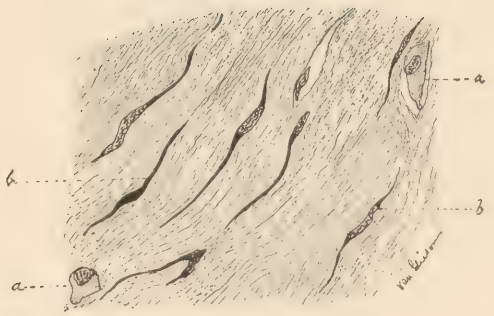


Fig. 18.—Section from the fourchette of the normal vulva, showing the normal fixed connective-tissue cells, *b*. *a*, plasma cells. (Drawn with same lenses as used in Fig. 17.)

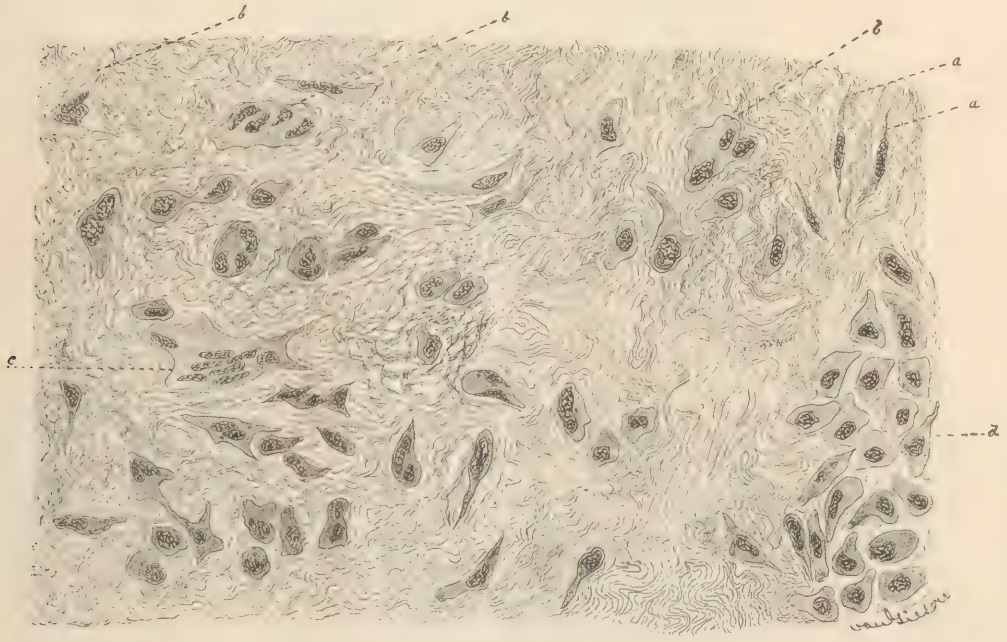


Fig. 19.—A portion of the subcutaneous connective tissue from Case I, showing the swollen or proliferating connective-tissue cells. *a*, *a*, slightly swollen fixed connective-tissue cells, or young fibroblasts. *b*, *b*, *b*, stages in the development of a giant cell, *c*, from the proliferating connective-tissue cells. *d*, group of small polygonal cells, apparently derived from the connective-tissue cells. Among the cells in this drawing are some young fibroblasts. (Same lenses used as for Fig. 17.)

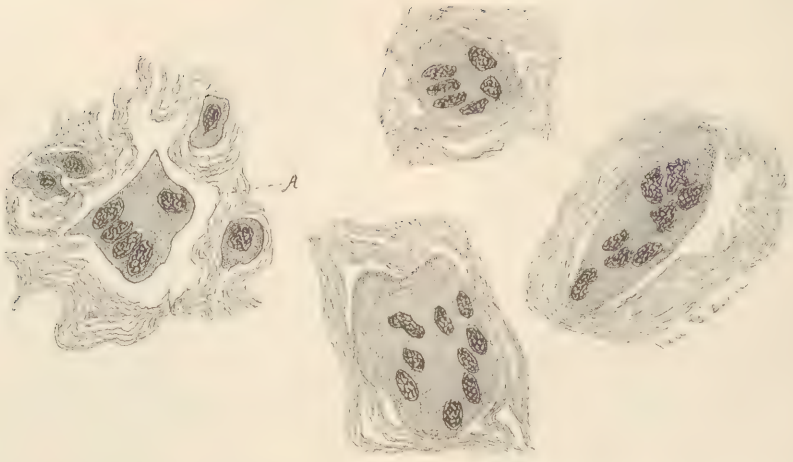


Fig. 20.—Showing the occurrence of giant cells in the interfibrillary spaces of the derma, *A*, from Case I. The other three giant cells are from Case II. Magnified as in Case I.

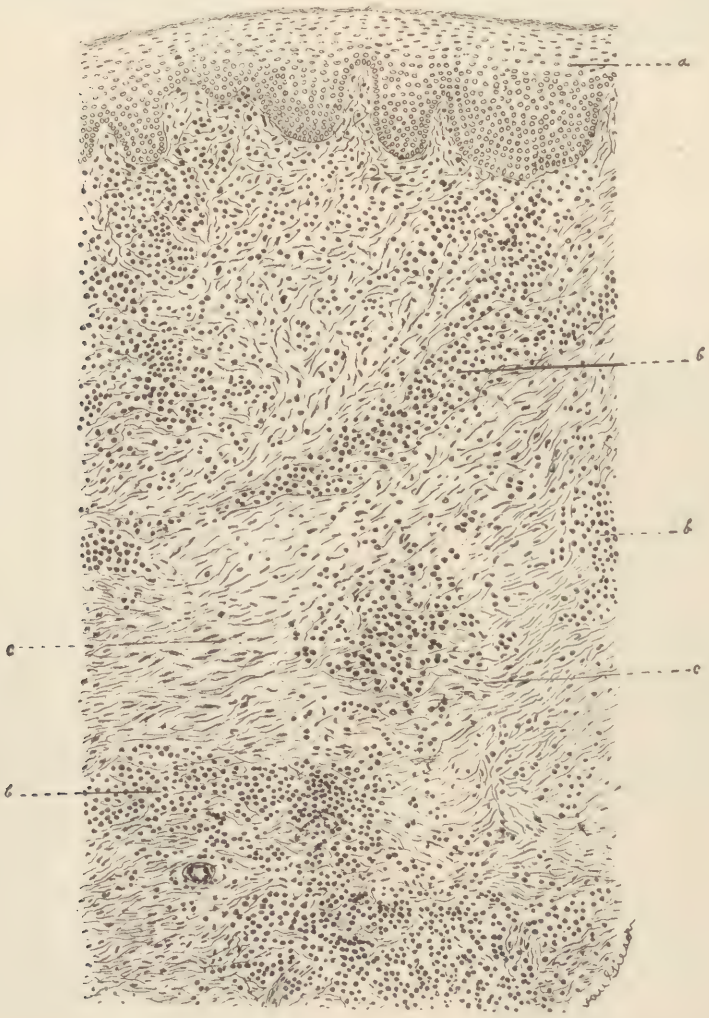


Fig. 21.—Section of the skin in Case II. *a*, normal epidermis. *b*, *b*, *b*, small rounded and polygonal cells, apparently derived from the connective-tissue cells, arranged for the most part diffusely. *c*, *c*, areas of new connective tissue, in which the spindle-shaped marks represent the fibroblasts.

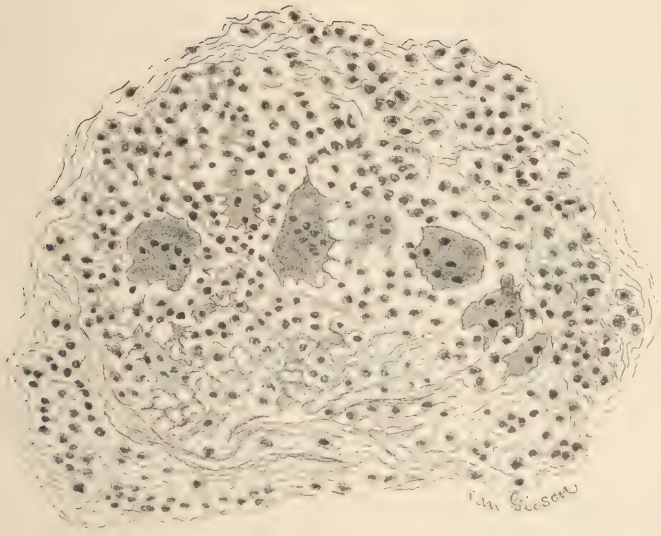


Fig. 22.—One of the giant-celled clusters from Case II.

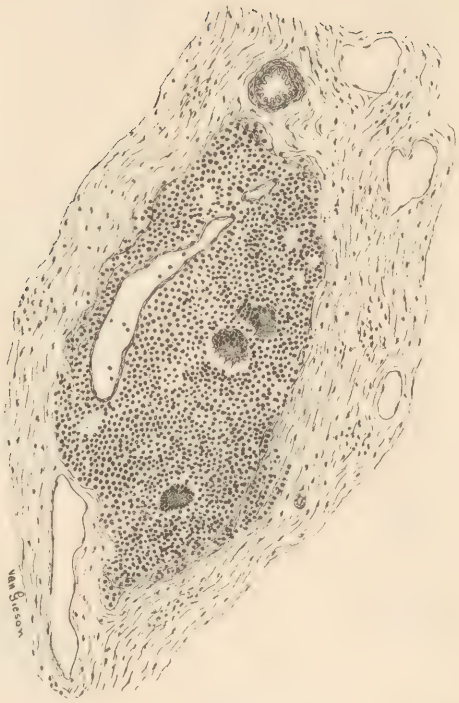


Fig. 24.—One of the giant-celled clusters from Case III surrounding a small vein.

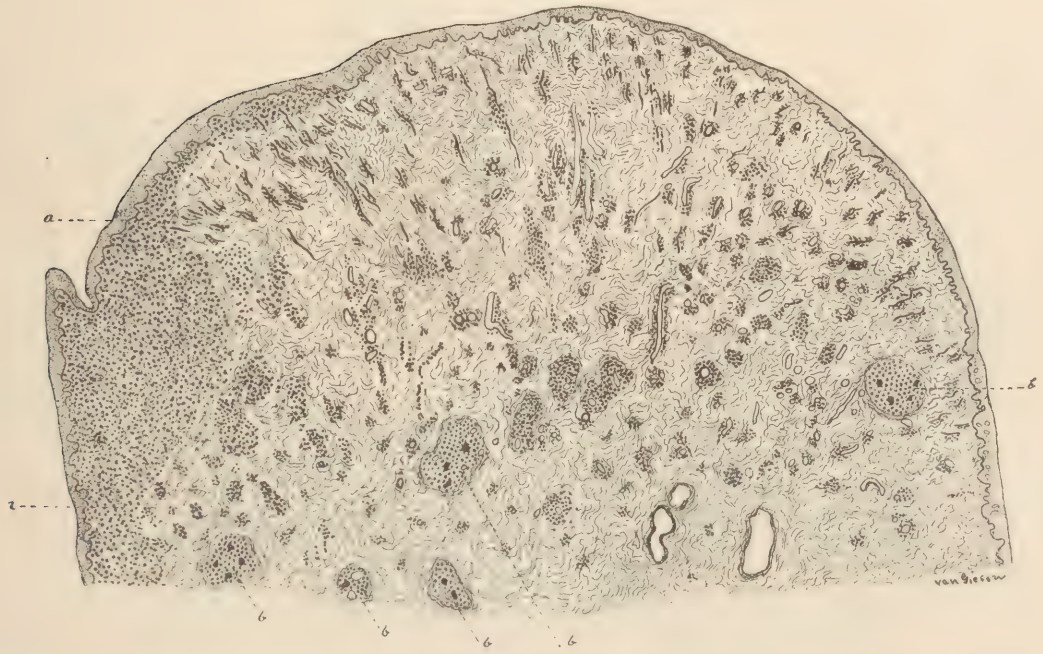


Fig. 23.—From Case II, showing a topographical view of the perivascular cell-clusters and their position in the extensive area of new connective tissue. *a*, zone of granulation tissue. *b*, giant-celled clusters.

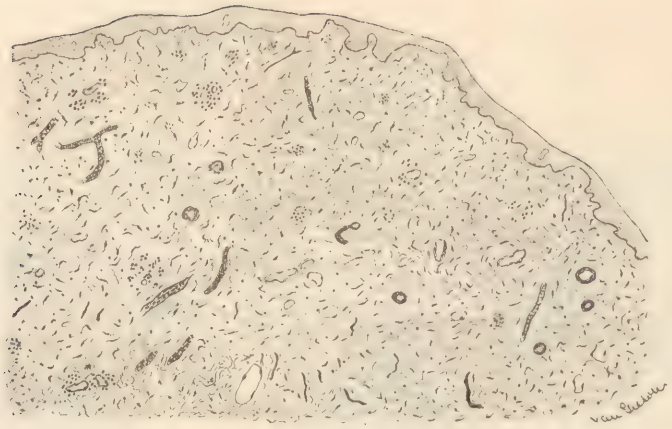


FIG. 25.—From Case IV, illustrating how in the case the growth consists quite exclusively of new connective tissue containing only a few rounded or polygonal cells. The small spindle-shaped dots indicate the fibroblasts.

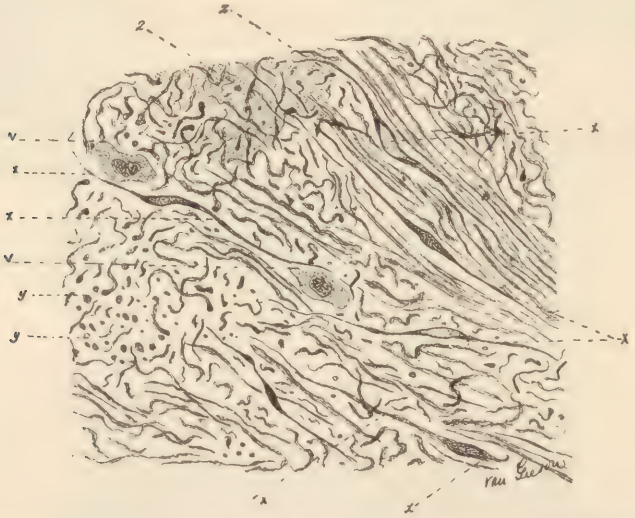


FIG. 26.—A portion of the section from which Fig. 25 was taken, more highly magnified, showing the minute structure of the new connective tissue. *x*, *x*, fibroblasts. *y*, *y*, new connective-tissue fibers and processes of the fibroblasts cut transversely. *v*, *v*, plasma cells. *z*, *z*, granular material in the interfibrillary spaces.

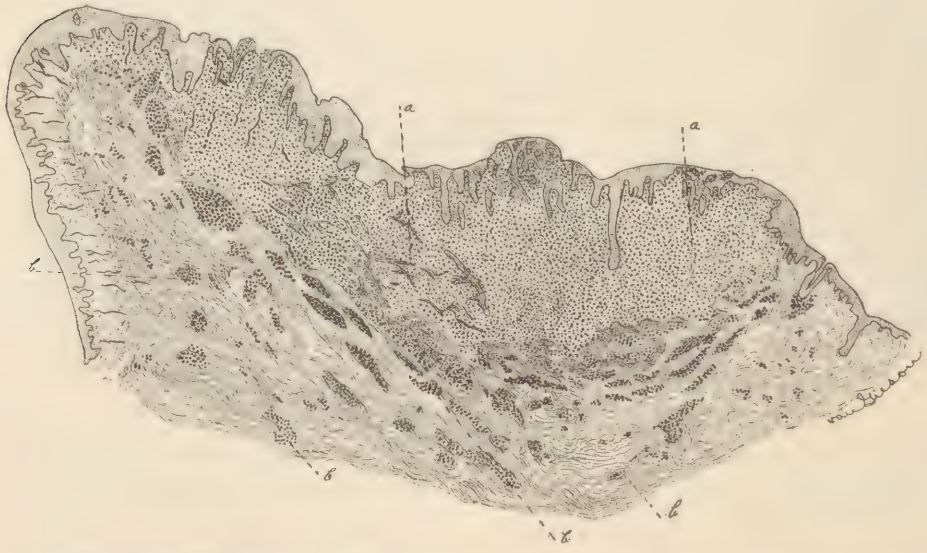


FIG. 27.—From Case IV, showing a patch of granulation tissue, *a*, *a*, which at two points has produced minute ulcers. *b*, perivascular clusters.

be affected, and its pinkisk-red color is then somewhat increased. There is no evidence of inflammatory engorgement, nor of œdematous swelling. The parts are not unusually hot, not tender on pressure or otherwise as a rule, but they are of an extreme hardness, sometimes presenting a dense elasticity, like one's ear, and again a stony feel, like cartilage or sclerodermatous tissue. The impress of the finger always meets resistance. It may be that the whole labium or the labia (if both are involved) may be thus uniformly sclerotic, or, as it often happens, there may seem to be a central kernel of great density surrounded by an atmosphere of elastic firmness. In uncleanly women, during pregnancy, and as a result of traumatism, this indurating œdema may extend beyond the labial limits. Well-marked secondary symptoms are constant concomitants. This form of indurating œdema, following a hard chancre, is very well shown in Fig. 8. Its history is as follows:

Case VI.—E. C., aged twenty-six, had a hard chancre on the left of the fourchette which lasted two months. Before it finally disappeared she noticed that the left labium majus slowly and painlessly swelled. As this enlargement was going on, an erythematous and papular eruption appeared over the body. These lesions were quite abundant about the genitalia and they are indicated in the dark spots scattered over the parts in the figure. By means of active treatment, general and local, the swelling of the labium was dissipated in three months. After that the woman continued antisyphilitic treatment for nearly a year, and then thought herself well. About two years after her infection she observed that the labia minora became larger and were pushed out between the external parts. She at that time had seen no evidences of syphilis for a full year. The hypertrophy of the nymphæ went on slowly, and in eight months they presented the appearances seen in Fig. 12. They are of many times their normal size, of very firm elastic consistence, of a pinkish hue, and nodulated and lobulated on their surface. The deep parts of the vulva were of a redder hue than normal, but not the seat of ulceration. The perineal rhaphe was thickened and a round lobulated mass of hyperplastic integument jutted from the anterior margin of the anus. The patient showed no perceptible evidence of syphilis, and the ganglia, which in the early stages had been markedly enlarged, were scarcely to be felt. In every respect the vulvar lesions were like those of the simple variety shown in Cases I and II.

The interesting point regarding the infiltrating œdema in this case, besides its typical history, was its amenability to antisyphilitic treatment. In many cases this form of œdema is very persistent and is frequently refractory to internal specific medication. Local mercurial treatment, combined with great cleanliness and antisepsis, very often is of decided benefit.

The next form of infiltrating œdema is well shown in the following case, from which Fig. 9 was taken:

Case VII.—K. C., aged twenty-four, had a small and ephemeral initial lesion at the base of the left labium minus. After it had healed she noticed that her genitals became redder than normal, particularly on the left side. At the regular evolution of secondary manifestations a linear series of condylomata lata showed themselves on the inner surface of the left labium majus. As these lesions grew in size and age she noticed that the corresponding large lip gradually and painlessly grew larger until it became three times the size of its fellow. Upon examination, I found no heat or sensitiveness, but a condensed, unyielding labium, which protruded markedly downward and outward and presented great deformity. The outlines of the superimposed condylomata are well shown in the figure. In the vulva there was much redness of a dull type and no ulceration.

This case, therefore, shows in an admirable manner infiltrating œdema accompanying secondary lesions—a form which is far from uncommon. I recently saw an instance of it in which the right labium majus was enlarged nearly to the size of a man's fist. In proportion to its size it is rebellious to treatment, and always requires local antisyphilitic treatment.

Though indurating œdema is more commonly seen in the primary and early secondary stages of syphilis, it may occur later in the disease—namely, in the first, second, and even third years. In these cases of late development, however, there is commonly a marked persistence and activity of the diathesis. While the indurating œdema of the primary and secondary stages of the disease usually accompanies or follows the active lesions, that of the later periods may be unaccompanied by any previous or present syphiloma. Though, however, late œdema may be thus complicated by various syphilitic processes, it very often is developed by vaginal or vulvar irritation, and also by traumatism.

The later form of indurating œdema is portrayed in an admirable manner by Case VIII, from which Figs. 10 and 11 were taken.

Case VIII.—K. R., aged twenty-five, was in my service in Charity Hospital in the winter of 1882 and 1883. Three years before admission she became syphilitic, and received little if any proper treatment. Though in the third year of her disease, she still presented a fading papular eruption and marked generalized adenopathies. She also had a persistent vaginal discharge, with some chancroidal ulcers in the vulva. Six months before admission she was kicked in the genitals by her husband. After the pain incidental to her bruise had subsided she noticed that her nymphæ grew large gradually and painlessly, until they presented the appearances shown in Figs. 10 and 11. The left labium minus was markedly swollen, and looked as if it contained a testis in its substance, while the right one was irregularly and less enlarged. The color of these morbid nymphæ was a deep and slightly purplish red. In consistence the left one was as hard as cartilage, while the right one was very firm and elastic. The inner surface of these indurated labia is shown in Fig. 11 to be nodulated and papillated. The hardening process ended abruptly at the bases of the nymphæ. In the vulva was a so-called chancroidal ulcer. The internal and local use of mercury caused slight softening in the induration. The woman would not consent to excision of the parts.

In this case the indurating œdema had its origin in the bruise of the nymphæ, the woman being in the active power of the syphilitic diathesis. It is probable that the vaginal discharge may have been a moderately accessory factor. The chancroidal ulcer was in this case scarcely to be considered as a factor in causation. This form of indurating œdema is much less common than the earlier forms, and it may also be seen on the lips and the prepuce. Typical syphilitic inguinal adenopathy is observed as a rule in these cases.

In general, all forms of indurating œdema are far from being well understood by the profession, and precise notions are not extensively held regarding the late form. As an instance of the lamentable ignorance which exists concerning this late indurating œdema, I may say that one of my cases has recently been published by a former interne of Charity Hospital as an example of *fibroma diffusum.*

Late lesions of syphilis in the vulva may be complicated by surrounding œdema.

The foregoing are the essential, and I may say direct, forms of syphilitic hypertrophy of the vulva, and we now come to the study of the more remote forms.

We frequently find in early syphilis and in later periods when the diathesis is active, and again when it is waning, ulcers which appear *de novo*, and from tradition we call them "chancroids." It is to-day a generally accepted fact that chancroidal ulcers are caused by many forms of active pus, and that syphilis is a frequent cause of the secretion which gives rise to these ulcers. There undoubtedly exists in syphilitics a vulnerability of the tissues, showing itself in their tendency to ulceration and hyperplasia. About the female genitals this tendency is shown in the development of chancroids upon parts irritated by uterine, vaginal, and vulvar secretions, and especially upon any lesion of continuity, such as an excoriation, a tear, a fissure, or upon the seat of vesicles. In their early stages these ulcers may resemble the classical chancroid, but as they grow older they lose more or less of their physiognomy. Since these ulcers play an important part in the causation of vulvar deformities, I have thought it worth while to present a very graphic representation of them, taken from one of my cases, in which also well-marked syphilitic new growths near the anus are portrayed.

In the chromo-lithographic picture are seen just within the vagina and in the recesses on each side of the urethra two so-called chancroids. The one on the right has extended outward and downward, and, when the parts were not separated, was scarcely visible. The one on the left runs parallel with the urethra, and, when the parts were in place, could not be seen. This secluded and hidden situation is not an uncommon one for these ulcers, and they are very often overlooked by untrained observers. It will be seen that the ulcers have sloping edges and fairly smooth bases which are covered with a greenish-gray film of pus under which is a slightly papillated surface. They look indolent and their history proves that in general they are aphlegmasic, persistent, and chronic. They occur on all parts of the female genitalia and may remain without any perceptible extension for a long time, but yet they frequently cause great harm. As long as they remain they give rise to a very low grade of secondary inflammatory engorgement which leads to hyperplasia, which may extend up the vagina or into the vulva, thickening the vaginal and often the rectal walls, attacking the labia minora by preference and causing their great hypertrophy, and also sometimes inducing similar change in the labia majora. All of the clinical features of the vulvar hypertrophies which result from chronic chancroids may be produced by these chancroids of syphilitic origin; therefore, having already described them, repetition is unnecessary. It, however, may be added with advantage that where the syphilitic diathesis is active, and often even when it is waning, specific evidences of the disease may be seen elsewhere upon the body. The hypertrophies produced by these syphilitic ulcers are similar to those of simple chancroids, except that we sometimes see a greater tendency to destructive ulceration, and in some cases to phagedæna. Though the clinical features of chancroidal and of this form of syphilitic sequelæ are hardly sharply enough drawn to warrant separate descriptions of their respective hyperplasia, the underlying facts must be stated, and this necessitates the division I have made. Hypertrophy of the vulva, therefore, depending on simple hyperplasia from chronic ulceration in syphilitic patients, is far from uncommon.

This brings us to the consideration of a condition of the tissues in older syphilitics, and usually in persons of the lower classes, which has not, according to my reading, been described by any author, but which, I am convinced from years of study, is quite common, about the genitals of women particularly.

This condition consists in a simple hyperplasia of the tissues of the genitalia, which results in more or less deformity. While early in the disease we so commonly see the tendency to ulceration, later in the diathesis it seems to ingraft on these tissues a tendency to a very low grade of inflammatory process by which organs and parts are much thickened and distorted. This hyperplasia in syphilitics is microscopically the same as that of non-syphilitics, and can not in any sense be considered as an essential evidence of the disease. A very clear idea of this remote effect of syphilis is given in the histories of the cases which follow.

Fig. 12 shows the condition, two years later, of the labia minora, clitoris, and circum-anal region of the woman whose history was given in Case VI, Fig. 8. She recovered from the indurating œdema of the vulva, and under treatment the evidences of syphilis were dissipated, yet, from the hyperæmia left by the early syphilitic lesion, later on a tumefaction of the vulva occurred which eventuated in the hypertrophy of that part in the manner shown in Fig. 12. Examination of the parts proved conclusively that the hyperplasia of the tissues was precisely the same to the eye as that found in non-syphilitics, and its clinical history was similar. Certainly, had I not known the woman's history, I should not have been reminded of syphilis at all by the condition of her vulva.

In the next case the woman had reached her fourth year of syphilis, when, as a result of elytritis and gonorrhœa, the tissues of the vulva and vagina became the seat of a very low grade of indolent inflammation which led to hyperplasia and hypertrophy.

Case IX. *Extensive Hypertrophy of both Labia Minora, the Clitoris, the Labia Majora, and the Introitus Vaginæ, with Chancroidal Ulcers.*—S. A., twenty-eight years of age, married, a seamstress, large and fleshy, contracted syphilis when twenty-two years old. She suffered severely in the secondary period and had very little treatment. In the fourth year of her syphilis she suffered from gonorrhœa for several months. After

recovery from this she noticed that her vulva was swollen and painful. During the two years following she had several attacks of vulvar and vaginal inflammation, and in this period she noticed the swelling of the outer parts of her genitals. During the last three years she has been several times in Charity Hospital. In the sixth year of her syphilis (early in 1889) I noted the following condition of her genitalia: The left labium minus is very greatly increased in length and thickness, the clitoris and its prepuce are very much hypertrophied, and the right labium minus (which was originally much shorter than its fellow) formed a long, fleshy process, which hung down nearly two inches between the thighs. The appearances are well shown in Fig. 13, the hypertrophied growths being brought into prominence by means of threads. The mucous membrane of these parts was somewhat thickened and similar to integument. The whole mass was of a deep violet or purple-red color. At the base of these tumors were three shallow ulcers which might be taken for chancroids. Eversion of the hyperplastic nymphæ showed a thickened, violaceous condition of the whole vulva, with a decided narrowing of the vaginal orifice by reason of the thickening of the tissues, which extended upward about three inches. The orifice of the urethra was obscured by a cluster of hypertrophied caruncles. The labia majora were also enlarged and swollen, and the very short perinæum ended in a tab-like mass of integument, seated just on the anterior border of the anus, but not encroaching upon it. From the stenosed vaginal orifice a copious persistent discharge escaped. The hypertrophied nymphæ presented a firm resistance to pressure, and the tissues of the vulva, though rather more dense than normal, were, as we may term it, in a succulent condition from the hyperæmia. The ulcerations were rather superficial, of brownish-red color, smeared with pus, smooth of surface, without well-defined outlines, and their margins devoid of any appearance of being undermined. There was little or no pain in the outer growths, though the vulva was rather tender, and sometimes, when irritated, the seat of a stinging, smarting, and itching pain. The sufferings of the patient, however, did not seem to be at all proportionate to the severity and extent of the morbid process. She had at times been treated energetically with antisyphilitics with no effect whatever. I ablated the external tumors, greatly to the relief of the patient. Later on, hot antiseptic injections and appropriate topical treatment cured the ulcers and lessened the vulvar hyperplasia. The woman left the hospital much improved and contented in mind.

It is interesting to remark that during the three or more years in which the vulvar hyperplasia was going on in this women, the victim of old and untreated syphilis, she suffered very little from the local affection. The progress of its development was slow, aphlegmatic, and unattended with any constitutional reaction. Microscopical examination of the removed masses showed that their structure was identical with that of hyperplasia occurring in non-syphilitic women.

Case X.—A still later evolution of this hyperplasia is shown by the following case: X. X., an American, aged thirty-two, a cook, became syphilitic when twenty-two years old. She suffered severely from multiform manifestations of the disease for four years, during which she followed treatment indifferently. Seven years after infection, not having suffered from any manifestation, nor having presented any evidence of the disease for three years, she, after an attack of elytritis, observed that her vulva became gradually swollen. This hypertrophy went on for three years, when it presented the appearances shown in Fig. 14. At this time she became much debilitated and took stimulants and opiates. While she was in this state ulceration began in the vulvar ellipse and destroyed considerable of the hyperplastic tissue. Having built her up with tonics and generous diet, and nearly cured the ulcers, I removed the hypertrophied masses and obtained a very favorable result from cicatrization. Microscopic examination of the new growths showed simple hyperplasia.

When the genitals are the seat of this hyperplasia in non-syphilitic women ulceration may occur, but it is commonly limited in extent and not very destructive in tendency, though from the nature of the parts such damage may be done in these cases as will lead to invalidism and death. In chronic chancroid the ulcerative tendency is sometimes well marked and even quite destructive. In syphilitic subjects with these hyperplasiæ the acme of disintegration is often observed. In them, as a rule, the ulcerations are more active and extensive than in non-syphilitics. Not only do we find severe ulceration in the syphilitic subjects, but also phagedæna, which may cause terrible destruction of the affected parts. This complication is well shown in Fig. 15, of which the history is as follows:

Case XI.—A. M., aged forty-seven, had had for years great hyperplasia of the vulva, following syphilis contracted ten years before. When she was in a dissipated and woe-begone condition, ulceration began about the fourchette. This lasted several weeks, and then the parts began to melt away from phagedæna with the result depicted in Fig. 15. Under treatment, healing was induced, cicatrization took place, and a fairly good condition of the parts was left, incontinence of the fæces being the most distressing symptom.

In Fig. 16 is well shown the appearance of an hypertrophied clitoris (posterior surface) which many years ago was for a time under my care, and which was removed by Dr. Bumstead. It had begun in a woman some years after syphilitic infection, as a simple hyperplasia, and ended in the full development as a fibro-cellular hypertrophy presenting a condition which approaches a diffuse fibroma. It shows in an admirable manner the tuberculations and lobulations seen in these new growths.

Nothing positive can be stated as to the condition of the inguinal ganglia in these cases of hyperplasia in old syphilitics. In some cases they are imperceptible, and in others, particularly when ulceration also is present, they may be more or less swollen. The adenopathy is more extensive, but with less density, than in early syphilis.

There is no doubt in my mind that the ninth case of Huguier's memoir, which he labels *esthiomène hypertrophique œdémateux et végétant*, is one of simple hyperplasia of the vulva in a distantly syphilitic woman.

Desruelles, who first reported this case and assigned syphilis as its cause, was convinced by Huguier that it was not syphilis for the reason that appropriate treatment had no effect upon it whatever. Huguier thought, as many have thought to this day, that syphilis only produced lesions which we may call essential; he did not know that in the wake of that disease simple hyperplasia might follow, depending upon it for causation, just the same as upon any

simple irritative process, such as vulvar or vaginal inflammation, irritations, and traumatisms.

Several other cases of Huguier's are excellent examples of simple hyperplasia in old syphilitics. His sixth case is in all probability one of simple hyperplasia, following or complicated with perineal abscess, yet he considers it an excellent illustration of "*esthiomène perforant de l'anus et de la vulve.*" His seventh case is either a fungating growth, following perineal abscess, or a malignant new growth; more probably the former. And so on to the end of the chapter.

Dr. I. E. Taylor's fifth case (brochure of 1888), which he calls *perforating lupus*, bears intrinsic evidence of being an instance of inflammatory hyperplasia of the vulva following laceration of the perinæum and resulting in procidentia recti. If the woman was not remotely syphilitic, the case may be taken as an example of what we sometimes see —namely, the hypertrophy of the vulvo-anal region following injury in parturition, the torn parts becoming chronically inflamed and the starting point of hyperplasia and its sequelæ.

The ultimate outcome of hyperplasiæ of the vulva in old syphilitics is about the same as that already sketched of the declining days of patients suffering from chronic intractable chancroids of that region.

The chronicity and inveterate course of these vulvar hyperplasiæ were undoubtedly due to the structural peculiarities of the vulva, to its excessive vascular and nervous supply, to the conditions to which it is so constantly subjected, and to its dependent position compressed between the thighs. Except in the mouth (and that very rarely) we do not see such persistent and deforming low-grade inflammation and hyperplasia.

Summing up, therefore, the inflammations and infiltrations of the vulva of non-malignant origin, we can include them in the following categories:

1. Small hyperplasiæ, caruncles, and papillary growths.
2. Large hyperplasiæ and hypertrophies.
3. Hyperplasia resulting from acute and chronic chancroids.
4. The various forms of hypertrophy induced by the indurating œdema of syphilis.
5. Hyperplasia resulting from chronic ulcers, the so-called chancroids, in intermediary and old syphilis.
6. Hyperplasia in old syphilitics, presenting no specific character, and occurring soon or long after the period of gummy infiltration, in some cases being coexistent with specific lesions elsewhere.

The foregoing affections have neither in their clinical history nor their pathology any resemblances to lupus, nor do they partake in any manner of the nature of lesions produced by tubercular infection.

In the last periods of many cases in which ulceration and destruction are very great, evidences of pulmonary phthisis may be seen, but my observation convinces me that the tuberculous infection does not occur through the genitals, but in the lungs of women worn and spent with disease. Many authors, particularly the French, have laid stress on the point that these vulvar lesions are the outcome of scrofula.

Some patients are more prone to inflammation and irritation than others, and they may become the subjects of vulvar hyperplasia. I have not been led to look upon a dyscrasia as an underlying cause of any moment in any non-syphilitic cases. In my experience the vulvar troubles begin when the women are well, and ill-health overtakes them when the hypertrophies have led to ulceration, fistulæ, deep abscess, fissures, and to strictures of the urethra and rectum and stenosis of the vagina.

In this connection I must say a word of tuberculous ulcers of the female genitals. It may be stated as a broad fact that tuberculosis of the female genitalia grows progressively more uncommon in occurrence as it descends from the ovaries, the tubes, and the uterus into the vagina and vulva. Tuberculosis of the vagina by extension of the process from above is hardly to be called very rare. Involvement of the vagina alone is far from common, and when it does occur in some cases the vulva may be more or less involved. Primary tuberculosis of the vulva is rare, and the most satisfactory case of it on record is that of Deschamps. Zweigbaum's case has been spoken of as being rare and peculiar. It is rare in the sense that tuberculosis of the female genitalia is rare. The details of it show that the morbid process began in the uterus and extended downward to the vulva. Chiari's case also seems to have been one of tuberculous infection of the vulva.

I have seen three cases in which ulcers began just beyond the external genital regions and in their extension involved the vulva. They had finely granular, coarsely granular, papillomatous, and even fungating surfaces, and were encircled by hard, somewhat everted edges, and secreted an abundance of pus. They began as round or oval, deep, even violaceous red tubercles, which soon broke down into ulceration. In former days we classed these lesions under the head of *scrofulide tuberculeuse ulcéreuse*, proposed by Hardy and Bazin. Two of my cases occurred before we knew of the existence of the *Bacillus tuberculosis*, while from the third and more recent case I was unable to excise a portion of the morbid tissue for examination. The patient, however, had pulmonary phthisis.

My studies and observations, therefore, convince me that vulvar ulcers (not hyperplasiæ or hypertrophies) may be very rarely caused by tuberculous infection, and that they should be included in our classifications. *If it is hereafter established beyond all question that lupus and tuberculosis of the skin are wholly identical in their nature and clinical history, we shall then have to admit that there is a lupus of the external female genitals. In the mean time we can content ourselves with the thought that what has heretofore been considered lupus on these parts is not lupus at all.*

Microscopical Examination and Pathology.

*Case I.**—This does not show the initial stages of the process by which the vulvar growths in the succeeding four

* The cases furnishing the morbid tissues are mainly those detailed in the text, but others have been used also for microscopic purposes. The numbering of the cases in this section is not in any way connected

cases have arisen, but it shows very well the earlier stages of this process. The specimen was a small, white, smooth-surfaced elliptoidal nodule (5 by 3 mm. in diameter), and was rather soft and yielding, like the finger-tip of a new-born child. (The specimens from all of the cases were hardened in strong alcohol, stained double with hæmatoxylon and eosin, and studied with a Zeiss one-twelfth oil-immersion lens.)

The *changes in the epidermis* are of a very moderate degree and consist of a slight deepening of the interpapillary portions and of a thinning here and there of the portions of the epidermis over the apices of the papillæ. Several of the prolonged portions of the rete mucosum are incompletely invested by sheaths of small rounded or polygonal cells. In such places the lowermost cells of the rete do not appear as a distinct row, and can not be distinguished from the adjacent polygonal cells of the papillary derma.

In the *derma* there are changes in the *blood-vessels*, in the *lymph spaces*, and in the *connective-tissue cells*. The endothelial cells of the capillaries, smaller arteries, and veins are uniformly swollen and granular, and project into the lumen of the vessels (Fig. 17). There are also swelling, granulation, and alteration of the shape of the cells corresponding in position to the adventitia of some of the blood-vessels, yet it is very difficult to determine in the sections whether these cells really belong to the blood-vessels or to the surrounding connective tissue. Some of the lymph spaces are dilated and their endothelial cells are changed in the same way as in the blood-vessels.

The connective-tissue cells are greatly increased in number and are altered in shape. Their cell bodies and branching processes are granular and swollen so that they completely fill up the interfibrillary spaces in which the normal connective cells lie (Fig. 19, compare with Fig. 18, showing the normal connective-tissue cells from the vulva). The connective-tissue cells are everywhere in a condition of proliferation, and there are very many small, rounded, and polygonal cells (Fig. 3, *d*) which seem to be derived from the proliferating connective-tissue cells, for intermediate stages between the slightly swollen connective-tissue cells and the polygonal cells are present (Fig. 19). There are also a few giant cells (Fig. 20) filling up the interfibrillary spaces of the derma, and are apparently phases of the proliferation of the connective-tissue cells, because transitional forms in the development of these giant cells from the connective-tissue cells were observed (Fig. 19, *b*, *b*, *b*, *c*). These giant cells are probably formed by a modification of the indirect cell-division process, in which the nucleus of a given connective-tissue cell segments while the protoplasm does not segment, but remains intact, surrounding the group of new nuclei.

The majority of the altered connective-tissue cells lie scattered about diffusely in the derma and are so numerous that they lie very close together and are often in contact with each other. Here and there the changed connective-tissue cells are aggregated in clusters situated quite uniformly in the vicinity of the blood-vessels. In these clusters the fibers of the stroma have been separated by the growth of the cells, a portion of the stroma has disappeared, and the small polygonal cells (Fig. 20, *d*) composing the clusters are separated by a scanty, delicately reticulated basement substance. No leucocytes or other evidences of exudation were found in these perivascular cell clusters. Possibly the element of increased nutrition of the connective-tissue cells about the blood-vessels may account for their more active proliferation in this region and for the formation of the perivascular clusters. Perhaps the proliferation of the connective-tissue cells of the adventitia of the vessels may also contribute toward the formation of these perivascular clusters.

Besides the changed connective tissue cells and their apparent derivates, the small polygonal cells (Fig. 19, *d*), there are other different cells quite profusely distributed through the sections. Some of these are narrow spindle-shaped cells with homogeneous shining extremities; others have long filamentous bipolar processes which are often bifurcated and branching (Fig. 26, *x*). Most of these cells are isolated, but in places several of them are grouped together in short slender strings with their long axes parallel. These cells are fibroblasts. Most of them are older forms of the progeny of the connective-tissue cells, and, tending to reproduce forms like their ancestors, may form new connective-tissue cells and new connective-tissue fibers.

Recently the life history of these fibroblasts has been very accurately studied in pathological processes and their significance made clear (Ziegler, "Die Entzündung u. die Entzündgewebebildung," "Lehrb. der. path. Anat.," Band 1, 1889). The youngest forms of the fibroblasts are identical with the small polygonal cells (Fig. 3, *d*). The young fibroblasts then lengthen out into spindle-shaped cells. Then the extremities of the spindle-shaped cell lengthen out and become fibrillated so that the fibroblast approaches gradually the shape and character of a fibrillated connective-tissue fiber (Fig. 26, *x*). In other young spindle-shaped fibroblasts fibrillæ grow out of the extremities and sides of the cell, and these, fusing with the fibrillæ and extremities of neighboring fibroblasts, become converted into fibrillated connective-tissue fibers, while the nucleus and some of the residual protoplasm of some of the fibroblasts persist and form a fixed connective-tissue cell lying on the surface of a bundle of newly formed connective tissue. Not all of the stages in the life history of the fibroblast could be observed in these cases, but in Case I the middle stages, and in Case IV (Fig. 26) the later stages could be well observed. Some of the cells shown in Fig. 3 are early forms of the fibroblasts.

Congestion and exudation are almost if not quite entirely absent in this case.

Case II.—This case illustrates a slightly later development of the same process as in Case I. The nodule is somewhat denser and larger (one centimetre in diameter) than in Case I, and its surface is slightly corrugated by shallow furrows running in different directions.

The *epidermis* is normal in places. In other places it is irregularly thickened and thinned. In the thinned places

with the numbering of those given in the clinical part. They were selected with a view to tracing the progress of the development of the new tissue step by step.

the horny layer is thicker than elsewhere, and the lower rows of cells of the rete mucosum are intermingled with the small round and polygonal cells of the underlying pars papillaris.

The lesions in the *derma* consist of changes in the blood-vessels, lymph spaces, and connective-tissue cells of the same character as described in the preceding case. The proliferated connective-tissue cells are arranged diffusely (Fig. 21) or in isolated clusters, as a rule, about the blood-vessels.

In this case there are areas of new connective tissue formed by fibroblasts (Fig. 21, *c*, *c*)—progressive forms of cell development from the derivates of the proliferating connective-tissue cells to new fibrillated connective tissue, and new fixed connective-tissue cells. There are also numerous giant cells in the interfibrillary spaces of the derma of the same nature and origin as in the preceding case (Fig. 20).

A few of the clusters, composed of small rounded or polygonal cells (similar to the cells shown in Fig. 19, *d*), contain one or more giant cells in their centers (Fig. 22). Although these giant-celled clusters look a little like tubercle granula, yet they do not, upon close examination, show any of the more definite morphological characteristics of tubercle granula. (No tubercle bacilli were found. Central coagulation necrosis absent. The clusters are not sharply outlined, and have no surrounding inflammatory zone of small round cells.) The giant-celled clusters are simply one of the phases of the proliferating connective-tissue cells.

Case III.—This case illustrates a stage of the same process, in which the development of new connective tissue by the fibroblasts has gone on to a very considerable extent, so that a large (three and a half to four ctm. in diameter), irregularly nodular, rather dense mass grew on the vulva by a broad base, and was lobulated by three or four deep crevasses. Its surface was finely corrugated by shallow, irregular furrows.

The *epidermis* is normal.

The condition of the blood-vessels resembles that in the previous specimen. The lymph spaces in places contain granular material. The polygonal cells are not arranged diffusely as in the first two cases, but are disposed in not very sharply outlined clusters and strings about the blood-vessels (Fig. 23). There are no evidences indicating the exudative origin of these clusters; on the other hand, they are composed of cells which look as if they were derived from the connective-tissue cells either of the connective tissue of the skin or possibly of the adventitia of the vessels. Some of these clusters (Fig. 23, *b*, *b*, *b*)—from four to six in thin sections, 12 mm. in diameter—contain one or more centrally situated giant cells (Fig. 24). These giant-celled clusters do not show the structural features of tubercle granula, and, as in the preceding case, seem to be phases in the proliferation of the connective-tissue cells.

This case contains comparatively fewer proliferated connective-tissue cells and more newly formed connective tissue than in Case II. The distribution of the new connective tissue and the relation of the changed connective-tissue cells is shown in Fig. 23. The new connective tissue contains many fibroblasts in late stages of development and a few giant cells in its interfibrillary spaces. (It is possible for these isolated giant cells described in these cases to form a brood of smaller cells by constrictions of the protoplasm about the individual nuclei, and then by a separation of the young cells from the giant cell.—Toldt, "Lehrbuch d. Gewebelehre," chap. i, 1888.)

A new feature in this case is the invasion of the newly formed connective tissue in two or three places by an inflammation with the production of granulation tissue (Fig. 23, *a*). This granulation tissue occurs in patches just beneath the epidermis. Some of these patches have an apparently definite relation to the deep crevasses spoken of in the description of the gross appearances, and are centered about the lips and walls of these crevasses. This granulation tissue resembles in structure the ordinary granulation tissue of wounds, and contains no bacteria or tubercle bacilli.*

Case IV.—This illustrates a stage in the same process observed in the preceding cases in which the vulvar growth is almost entirely composed of new connective tissue, containing very few proliferating connective-tissue cells (Fig. 25). The gross appearances are very much the same as described in the preceding case, except that the mass contained several soft, reddish, superficial patches (two to seven mm. in diameter), corresponding to the places where the growth was invaded by granulation tissue.

The new connective tissue is loosely arranged, and consists partly of completely formed fibrillated fibers and partly of the interlacing processes of the fibroblasts (Fig. 26). The interfibrillary space contains a few giant cells, and here and there some granular material (Fig. 26).

In several places this newly formed connective-tissue mass has been invaded by an inflammation with the production of granulation tissue. In spots the epidermis over the patches of granulation tissue was disintegrated, so that minute ulcers have been formed (Fig. 27).

Case V.—The growth originating in the clitoris region is spherical (about 1½ cm. in diameter), and its surface is perfectly smooth. The growth in the labium majus is diffusely arranged and the epidermis is smooth.

The structure of this growth is entirely analogous to

* I wish to make it clear that the isolated giant cells in the first four cases and the giant cells in the clusters in Cases II and III are not characteristic of any pathological process, that they are not of tubercular origin, and that they have no special significance beyond indicating a modification of the indirect cell-division process. It is desirable to have these points understood, because the pathology of this field (Cases I to V) of vulvar lesions is very obscure. Some observers have described the appearances in the sections of an isolated case well enough, but have failed to trace out the process producing the growth. Others—apparently from the occurrence of just such structures as these giant cells and giant-celled clusters, produced by an ordinary chronic cellular inflammation of the skin—have been led to make the diagnosis of lupus, lupoid degeneration, and esthiomène. It is a waste of time to try to make out what pathologists meant by lupus before the discovery of the tubercle bacillus, for the term was used too indefinitely. At present the term lupus among *pathologists* has a precise meaning—it is tubercular inflammation of the skin. It would be well for clinicians to use the term lupus, especially in the vulvar region, to designate tubercular inflammation only, and to classify the other vulvar lesions included under lupus, as far as possible, on a morphological basis.

Case IV, except that no patches of granulation tissue were found in the sections.

Résumé and Conclusions.—In the first case there is, hand in hand with the proliferation of the connective-tissue cells, a development of fibroblasts from their progeny, and a subsequent formation of new immature connective tissue from the fibroblasts, so that the size of the nodule depends partly upon the multiplication of the connective-tissue cells and partly upon the presence of the immature new connective tissue. In the succeeding four cases the new connective tissue produced in this way becomes more mature and more extensive. Since the fibroblasts may themselves proliferate (Ziegler, *loc. cit.*), as more and more fibroblasts are produced, fresh increments of new connective tissue result, and the nodule grows larger and larger.

After these growths attain a certain size, from their situation, where they may be subjected to pressure, chafing, irritating discharges, etc., an inflammation with the production of granulation tissue is liable to occur, as in Cases III and IV.

This process, described in the first five cases, is a form of inflammation with the production of new connective tissue, while congestion and exudative products are almost if not entirely absent, and is termed *chronic productive* or *chronic cellular inflammation.* Productive inflammation in mucous membranes and transitional cutaneous mucous membranes produces a new growth of connective tissue in the stroma, occurring diffusely or in the form of nodular polypoid outgrowths. A characteristic feature of this form of inflammation is its slow development and its tendency to persist for a long time. These general characteristics of productive inflammation agree very well with the clinical history and physical properties of the vulvar growths in the five cases examined microscopically.

The foregoing description applies only to the anatomy of simple hyperplasiæ, which have thus been traced through all periods of their development and course. But it must be remembered distinctly that hyperplasia in old syphilitic subjects presents precisely the same pathological appearances as in non-syphilitics. My aim in this essay has been to clear away all the darkness that has obscured these vulvar lesions, by showing that the majority of them are in no way specific or lupous in their nature, but that they are simple hyperplasiæ which, owing to their situation, have undergone various changes. I have not attempted to portray the pathological anatomy of any of the syphilitic new growths, since that has been done by many, and it was not essential to the scope of this essay.

Bibliography.

C. Andronico, "Tumori vascolari dolorosi del meato urinario muliebre." "Comment. clin. d. mal. d'org. gen. urin.," Pisa, 1884, i, pp. 56 to 59.

B. F. Baer, "Multiple Polypoid Fibroma of the Nymphæ." "Am. Jour. of the Med. Sci.," 1882, vol. lxxxiii, pp. 439 *et seq.*

Leroy des Barres, "Bulletin de la soc. anat.," 1878, Paris.

E. Bazin, "Leçons sur la scrofule," Paris, 1861, p. 219.

E. Bazin, "Leçons sur les affections cutanées artificielles," Paris, 1862, p. 461.

G. Bernutz, "Archives de tocologie," 1874, p. 412.

G. Bernutz, "Esthiomène." "Nouveau dictionnaire de méd. et de chirurgie prat.," Paris, 1871.

P. Bouloumié, "Polypes et excroissances de l'urèthre chez la femme." "Union méd.," 1880, 3 sér., xxx, p. 85 *et seq.*

P. Boulton, "A Case of Extensive Syphilitic Disease of the Vulva with Gummy Hyperplasia of Clitoris, Prolapsus Recti, etc." "British Med. Journal," 1883, vol. ii, p. 1017.

E. Bumm, "Zur Aetiologie und diagnostischen Bedeutung der Papillome der weiblichen Genitalien." "Sitzungsbericht der phys. med. Gesellsch. zu Würtzburg," 1886, p. 391 *et seq.*

F. J. Bumstead, "Hypertrophied Clitoris." "Photographic Review of Med. and Surgery," vol. i, 1870.

Bumstead and Taylor, "The Pathology and Treatment of Venereal Diseases," Philadelphia, 1883, pp. 409, 410.

W. Penn Bush, "Hypertrophy of Clitoris." "Photographic Review of Med. and Surgery," vol. ii, p. 22, 1870.

J. Boys de Lowry et H. Costilhes, "Recherches cliniques sur les ulcérations du col de l'utérus," etc. "Gazette médicale de Paris," 1845.

H. Canard, "Beitrag zur Anatomie und Pathologie der kleinen Labien." "Ztschr. für Geburtsh. und Gynäkol.," Stuttgart, 1884, vol. x, pp. 62 *et seq.*

Cayla, "Esthiomène de la vulve, forme tuberculo-ulcéreuse." "Bull. de la soc. anat. de Paris," 1881, vol. lvi, p. 152.

H. Chiari, "Ueber den Befund ausgedehnter tuberculösen Ulceration in der Vulva und Vagina." "Vierteljahr. für Derm. und Syph.," vol. xv, 1886, pp. 341 *et seq.*

T. Cody, "Elephantiasis of the Labia, Vulva, etc." "Lancet," 1882, vol. ii, 265.

H. L. Collyer, "Fibroma Diffusum of the Labia Minora." "Am. Jour. of Obstet.," December, 1889.

V. Cornil, "Bulletin de la soc. anat.," 1874, p. 231.

V. Cornil, "Leçons sur la syphilis," 1879, p. 128.

T. H. Curtis, "Observation d'esthiomène de la région vulvo-anale." "Annales de derm. et de syphiligraph.," vol. ii, 1870, 434.

G. Dejardins, "De l'œdème scléreux et syphilitique de la vulve." "Thèse de Paris," 1870.

E. Deschamps, "Étude sur quelques ulcérations rares et non-vénériennes de la vulve et du vagin." "Archives de tocologie," January, February, and March, 1885.

Desruelles fils, "Observation d'hypertrophie particulière de la vulve." "Arch. gén. de méd.," 1884, 4 série, t. iv, p. 314.

J. Matthews Duncan, "On Hæmorrhagic Lupus of the Female Genital Organs." "Edinburgh Med. Journal," July, 1884.

J. Matthews Duncan, "Lupus of the Pudendum." "Med. Times and Gazette," November 15, 1884.

J. Matthews Duncan, "On the Ulceration of Lupus of the Female Generative Organs, including Perforations, Pits, and Excavations." "Transactions of the Obstetrical Society of London," vol. xxvii, 1886, pp. 139 *et seq.*

J. Matthews Duncan, "On the Hypertrophy of Lupus of the Female Generative Organs." "Transactions of the Obstetrical Society of London," vol. xxvii, 1886, pp. 230 *et seq.*

R. W. Felkin, "Menstrual Engorgement of the Labia Minora following a Blow." "Trans. of the Edinb. Obstet. Society," 1887, xii, pp. 199 *et seq.*

P. Ferrari, "Della ninfo-elephantiasi sifilitica." "Raccoglitore med.," Forli, 1879, 4 s., xi, pp. 413 *et seq.*

E. Finger, "Œdema indurativum." "Vierteljahressch. für Dermatologie und Syphilis," vol. xix, 1887, p. 53.

A. Fiquet, "Sur l'esthiomène," Paris, 1876.

A. Fournier, "Leçons sur les syphilides des muqueuses." "Gaz. des hôp.," No. 73 *et seq.*, 1880.

A. Fournier, "Leçons sur la syphilis," Paris, 1881, p. 140.

H. Fritsch, "Elephantiasis clitoridis et labiorum minorum." "Centralblatt für Gynäkol.," 1880, iv, p. 198.

Gardiner, "Elephantiasis of the Labia Minora and Clitoris." "Canada Med. and Surg. Journal," 1884, vol. xii, p. 432.

W. Goodell, "Clinical Lecture on Urethral Caruncle." "Phil. Med. Times," 1881–'82, xii, pp. 161 *et seq.*

L. Gosselin, "Arch. gén. de médecine," December, 1854, p. 648.

L. Gosselin, "Chancrous Erythemato-elephantiasic Unilateral Vulvitis." "Gaz. des hôp.," No. 89, 1877, p. 705.

Grancher, "Scrofule." "Dictionnaire encyclop. des sciences méd. de Dechambre."

A. Guérin, "Maladies des organes génitaux de la femme," p. 410, Paris, 1864.

E. Guibout, "Diverses affect. non-spécif. des organes genito-urinaires des femmes." "Union médicale," 1847, p. 208.

C. L. Gwin, "Reflex Irritation from Hypertrophy of the Labia Minora." "Trans. of the Texas Med. Assoc.," Austin, 1885, vol. xvii, pp. 293 *et seq.*

A. Hegar, "Die Entstehung, Diagnose u. chirurgische Behandlung der Genitaltuberculose des Weibes," Stuttgart, 1886. Appended to this brochure there is a tolerably full bibliography of tuberculosis of the genitals in women.

H. Hildebrandt, "Die Krankheiten der äusseren weiblichen Genitalien." Billroth's "Handbuch der Frauenkrankheiten," Stuttgart, 1877.

Homolle and Monod, Fiquet's "Essai sur l'esthiomène," p. 20, Paris, 1876.

P. C. Huguier, "Mémoire sur l'esthiomène ou dartre rongeante de la région vulvo-anale," Paris, 1849.

J. Hutchinson, "Med. Times and Gazette," Oct. 20, 1860.

J. N. Hyde, "The Syphiloma of the Vulva." "Journal of Cutaneous and Genito-urinary Diseases," April and May, 1889.

E. W. Jenks, "Diseases of Vagina and Vulva." Pepper's "System of Medicine," 1886, iv, pp. 367 *et seq.*

Jobert, "Gaz. des hôpit.," 1856, p. 183.

C. B. Kelsey, "Rare Affection of the Rectum and Anus." "New York Med. Jour.," Aug. 7, 1886.

L. Labbé, "Note sur l'hypertrophie ou elephantiasis des grandes lévres." "Ann. de gynécol.," 1880, xiv, pp. 241 *et seq.*

T. Landau, "Zur Casuistik der chronischen Ulcerationen an der Vulva." "Archiv für Gynäkologie," Berlin, 1888, xxxiii, pp. 115 *et seq.*

J. De la Sota y Lastra, "Legeras consideraciones sobre el diagnóstico y tratamiento del lupus ó estiomena de la vulva." "Med. práct.," Madrid, 1888–'89, i, pp. 112 *et seq.*

E. Littré, "Dictionnaire de médecine," art. "Esthiomène," Paris, 1884.

Angus Macdonald, "Lupus of the Vulvo-anal Region." "Edinburgh Med. Jour.," April, 1884.

Macy, "Arch. gén. de médecine," 1876, p. 605.

M. D. Mann, "System of Gynæcology by American Authors," Philadelphia, 1887, vol. i, p. 518.

W. P. Manton, "Some Rare Forms of Vulvar Tumor." "Canada Med. and Surg. Jour., 1887–'88, xvi, p. 281 *et seq.*

Aimé Martin, "De l'œdème dur des grandes lévres symptomatique du chancre infectant, etc." "Annales de gynécologie," December, 1878.

E. Martin, "Hand-Atlas der Gynäkologie und Geburtshülfe," Plate 32, Figs. 1 and 2.

E. Martin, "Monatsschrift für Geburtskunde," Bd. 18, p. 348.

L. Martineau, "Esthiomène ano-vulvaire." "Gaz. des hôpit.," 1880, liii, pp. 458, 474, 522, 556, and 602.

L. Martineau, "Syphilides vulvaires." "Union médicale," 1880, p. 665.

L. Martineau, "Leçons sur l'esthiomène de la vulve." "Académie de médecine," 1883.

L. Martineau, "Leçons sur la vaginite non-blennorrhagique," Paris, 1884.

Maudet, "Tumeur de la petite lèvre (hypertrophie éléphantiasique)." "Jour. de méd de l'ouêst," Nantes, 1882, xvi, p. 382.

C. Mauriac, "Notes to the French Translation of West's Lectures on Diseases of Women," p. 825, 1870.

M. Michel, "A Rare Form of Vulvar Disease." "Am. Jour. of the Med. Sci.," 1884, vol. lxxxvii, pp. 457 *et seq.*

Monod, "Bull. de la soc. anat.," 1874, p. 237.

Munier, "Perforating Esthiomène of the Vulvo-anal Region." "Bull. de la soc. anat.," 2 s., tome iv, 1859, p. 305.

Nélaton, "Gaz. des hôpit.," March, 1854, p. 117.

G. C. Nourry, "Sur quelques cas non signalés d'esthiomène de la vulve," Bordeaux, 1886 (Thesis).

G. Oberlin, "De l'œdème dur des grandes et des petites lèvres symptomatique de la syphilis," Paris, 1879.

J. Péan et L. Malassez, "Étude clinique sur les ulcérations anales," Paris, 1871.

Pamard, "Hypertrophie des petites lèvres." "Bull. et mém. de la soc. de chirurg. de Paris," 1883, N. S. ix, pp. 250 *et seq.*

P. Torras y Pascual, "Pseudo-ulceras de los genitales en las prostituas." "Gac. med. cat.," Barcelona, 1885, viii, 678 *et seq.*

Grace Peckham, "A Contribution to the Study of Ulcerative Lesions of the Vulva, commonly called Lupus or Esthiomène." "Am. Jour. of Obstetrics," August, 1887.

P. Petit, "Syphilide hypertrophique de la vulve." "N. arch. d'obst. et de gynéc.," Paris, 1889, iv, pp. 1–6.

T. A. Potapoff, "Demonstratsija bol. s. Lupus om vulvæ." "Nanch. Besedy vraed zakarkazsk. Poival Inst. Tiflis," 1887, xi, 122 *et seq.*

W. O. Priestley, "Chronic Papillary Inflammation of the Vulva." "Trans. of the Obstet. Society of London," vol. xxvi, p. 156.

Rennert, "Ein Fall von Elephantiasis Vulvæ." "Centralblatt für Gynäkologie," 1882, vol. vi, pp. 689 *et seq.*

A. Richard, "Observation d'esthiomène éléphantiasique." "Arch. gén. de méd.," 1854, 4 serie, t. iii, p. 400.

Rokitansky, "Elephantiasis des Præputium der Clitoris." "Allg. Wien. Med.-Ztg.," 1881, xxvi, p. 477.

Rosencranz, "Ueber Elephantiasis Arabum mit Anschlag von zwei Fällen von Elephantiasis der Lab. Majora," Berlin 1873.

C. M. Seltzer, "Condylomatous Tumor of the Vulva." "Boston Med. and Surg. Journal," 1883.

T. W. Simon, "Non-specific Fungoid Growth of the Vulva." "Med. and Surg. Reporter," vol. lvi, 1887, p. 391.

A. J. C. Skene, "Diseases of the Bladder and Urethra in Women," New York, 1882.

W. G. Smith, "Two Cases of Warty Growths on the Vulva." "Obst. Jour. Great Britain," 1880, viii, pp. 243 *et seq.*

A. W. Stein, "Serpiginous Chancroid of the Vagina." "Journal of Cut. and Gen.-urin. Diseases," July, 1889.

A. Stravino, "Dello edema duro delle grandi labbia, contributione clinica ed anatomo-pathologica." "Giorn. internaz. d. sc. med.," Napoli, 1885, N. S., vol. vii, 449 *et seq.*

Isaac E. Taylor, "Lupus or Esthiomène of the Vulvo-anal Region." "Trans. of the Am. Gynæc. Soc.," Philadelphia, 1882, vi, pp. 199 *et seq.*

Isaac E. Taylor, "Lupus of the Cervix Uteri and Female Genitalia," New York, 1888.

G. Thin, "Histological Observations and Remarks on Lupus" (report on Duncan's cases). "Trans. of the Obstet. Society of London," vol. xxvii, 1886, pp. 315 *et seq.*

G. I. Townsend, "Esthiomène of Perforating Variety." "Boston Med. and Surg. Journal," Sept. 9, 1886.

M. Moul le Vallée, "Bull. de la soc. de chirurgie de Paris," 1861, 2 s., t. 1, p. 464.

P. Verdos, "Influencia de las affecciones venéreas en el desarrollo de la hipertrofia de los grandes labios de la vulva." "Gac. med. catal.," Barcelona, vol. viii, pp. 424 *et seq.*

F. Verchére, "Des portes d'entrée de la tuberculose." "Thèse de Paris," 1884, p. 85.

C. West, "Lectures on Diseases of Women," 4th edition (ed. by Duncan), pp. 655 *et seq.*, 1871.

Weinlechner, "Vorstellung einer Kranken mit grossen Zerstörungen des äusseren Genitale in Folge von tuberculösen Geschwüren auf syphilitischen Grundlage." "Sitzungsbericht d. geburtsh.-gynäkol. Gesellschaft in Wien," 1889, ii, pp. 9 *et seq.*

Wennig, "Hypertrophy of the Labia Minora." "Obstet. Gazette," Cincinnati, 1883, vi, pp. 300 *et seq.*

Winckel, "Pathologie der weiblichen Sex.-Organe," p. 268.

P. Zweifel, "Die Krankheiten der äusseren weiblichen Genitalien und die Dammrisse." "Deutsche Chirurgie von Billroth und Luecke," Stuttgart, 1885.

M. Zweigbaum, "Ein Fall von tuberculöser Ulceration der Vulva, Vagina, und der Portio Vaginalis." "Berlin. klin. Wochenschrift," May 28, 1888.

In the "American Journal of the Medical Sciences" for February, 1890, will be found a paper by me on a hitherto undescribed form of new growth of the vulva. It consists of a low grade of inflammatory affection, which ultimately destroys the parts through contraction and condensation of the tissues.

40 West Twenty-first Street.